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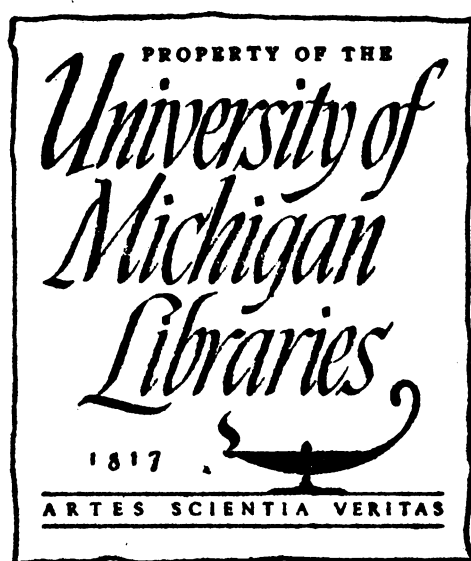
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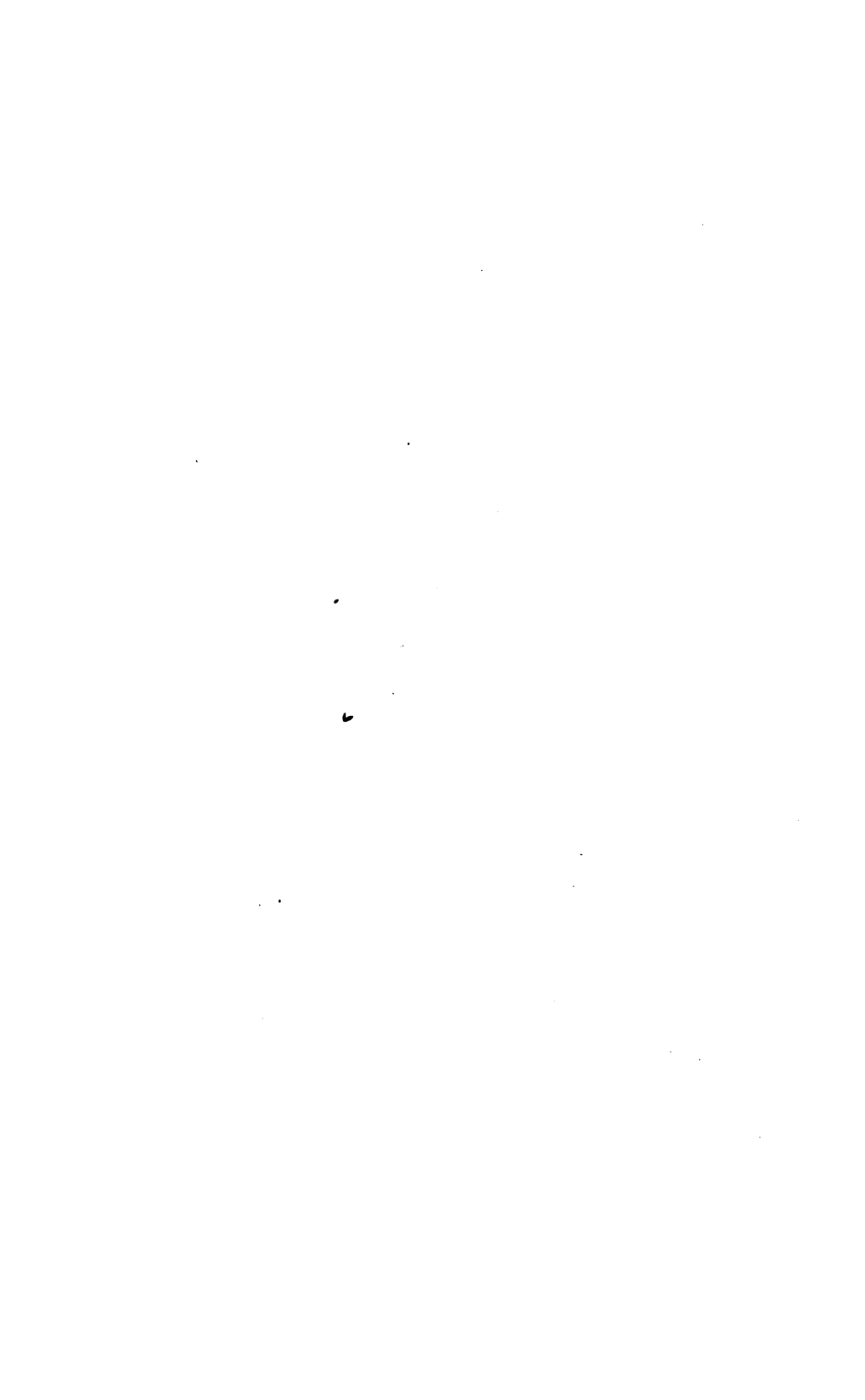
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ISTHMUS OF DARIEN SHIP CANAL.



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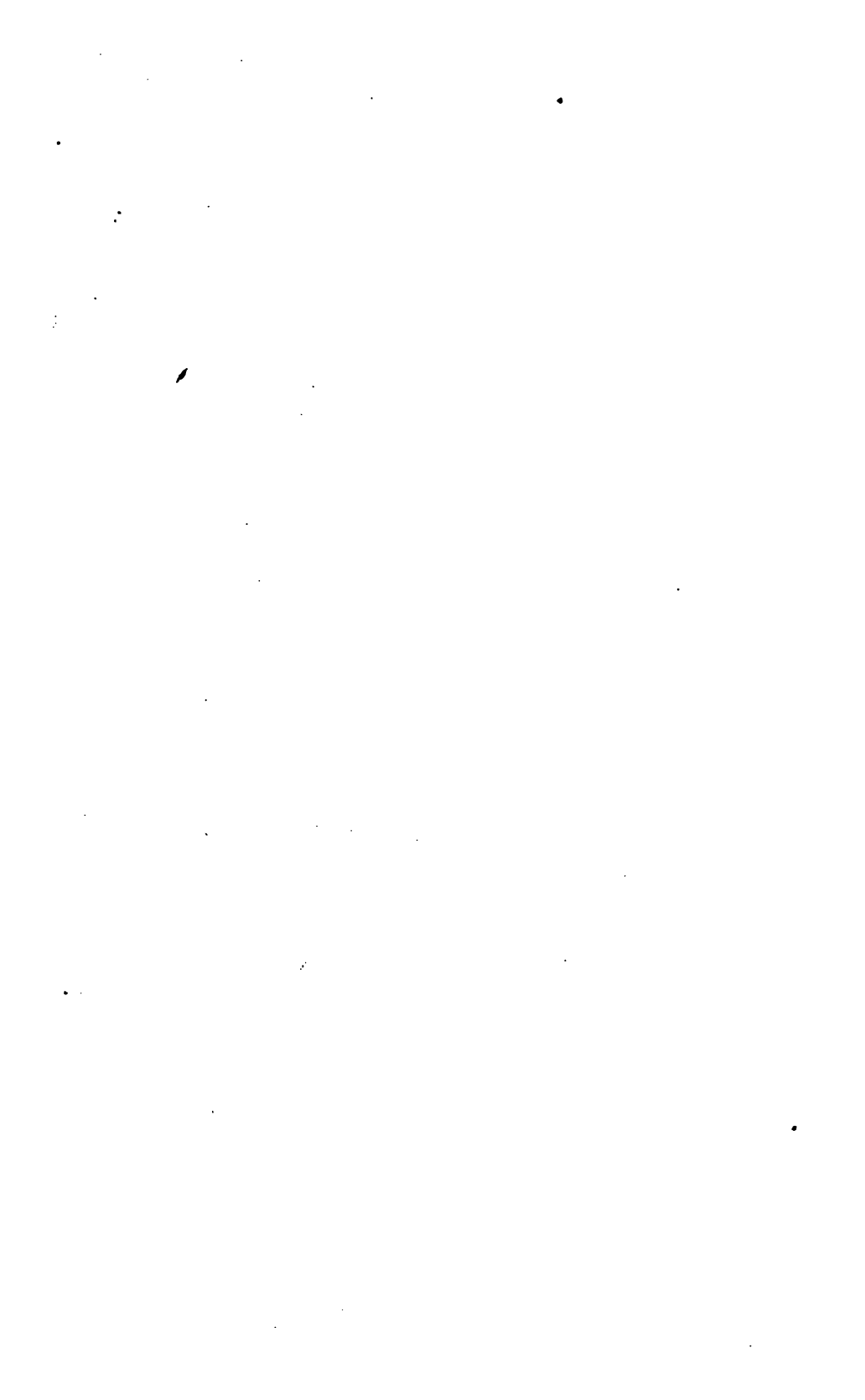
“ Information has lately been received at this department from the Minister of Her Britannic Majesty, that the Company which had contracted to build a ship canal across the Isthmus of Nicaragua, having found it impossible to carry out the plan as originally contemplated, has resolved to propose to the government of Nicaragua a modification of that plan, with the view of constructing a canal of smaller dimensions than those specified in the contract; and the British Minister has been instructed to intimate to this department, that if this information should prove correct, Her Majesty's Government would feel themselves at liberty, under the 7th article of the treaty of April 19, 1850, to withdraw their protection from that Company, and to transfer it to any other Company which should undertake a canal on the original plan; it being deemed of the utmost importance by the British Government, that the great conception of an inter-oceanic canal, adapted to the accommodation of the vessels of the whole commercial world, should not dwindle down to an ordinary transit route for coasting vessels, which, to distant nations, would be comparatively destitute of value.”—*From Mr. Everett's communication to the President of the United States, laid before Congress by the President, on the 18th February, and reported in the “Times” of March 3rd.*

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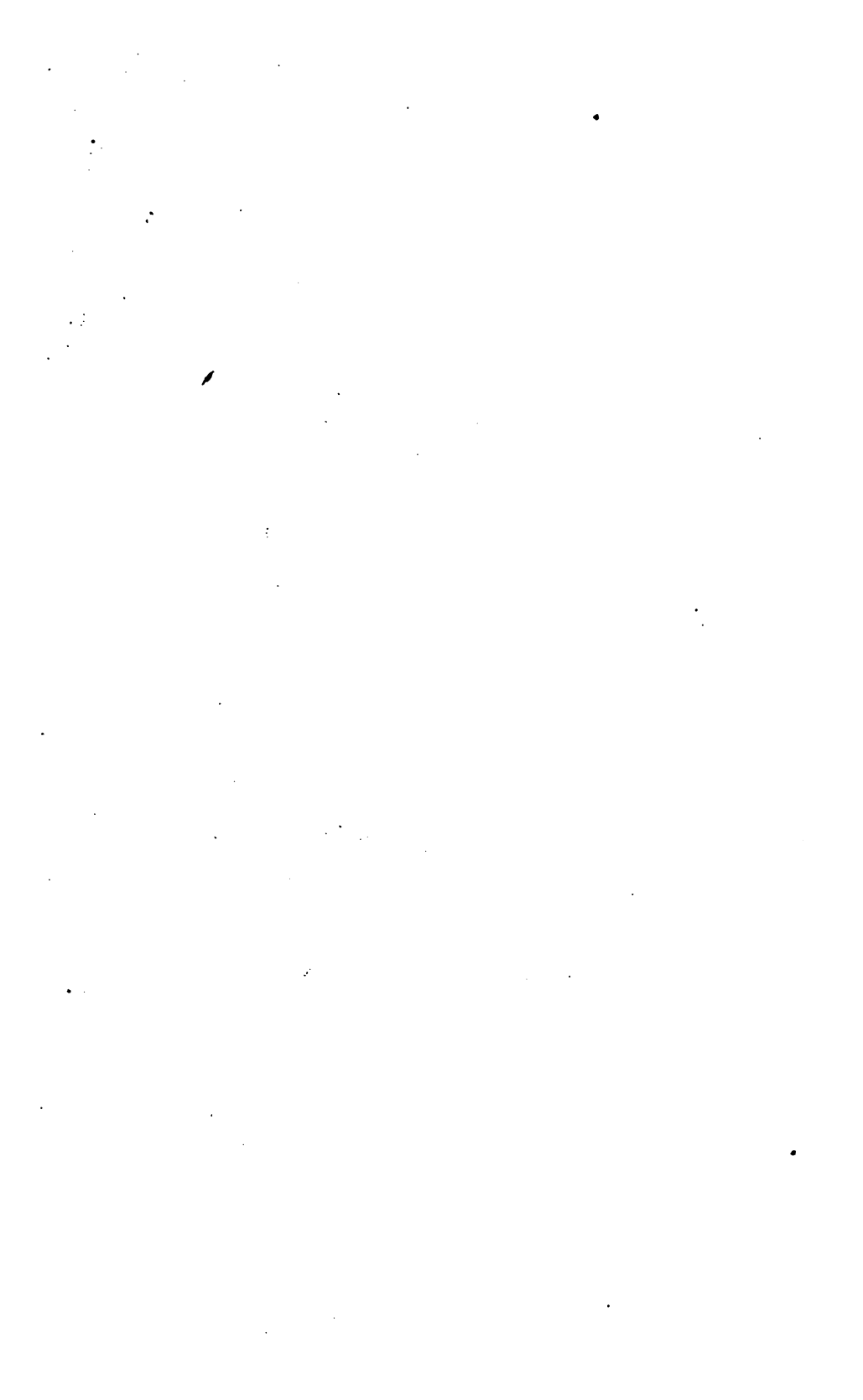
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TO
MESSRS. LEWIS H. & EDWARD HASLEWOOD,
IN GRATITUDE
FOR THE EARLY ASSISTANCE RENDERED
BY THEM
TO HIS EFFORTS IN THE
PROSECUTION OF THE PROJECT OF A SHIP CANAL
FROM THE ATLANTIC
TO THE
PACIFIC OCEAN, ACROSS THE ISTHMUS OF DARIEN,
THESE PAGES ARE RESPECTFULLY DEDICATED,
BY
EDWARD CULLEN, M.D., M.R.C.S.E.



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I have added, in the present Edition, a few corroborative notes and concurrent passages from various sources, some of them of 150 years' date, which may serve to elucidate, and perhaps enliven the dryness of the more sober form in which I have considered it my duty to the mercantile public to cast the details of the present narrative. I have also added a brief sketch of the History of the Scotch Colony of Darien, the fate of which is to me the more interesting, as I came out, in December, 1849, upon the exact spot of its settlement, after four days' lonely wandering in the bush, and fixed upon it at once and without any hesitation, as the terminus for a Ship-Canal and a station for a colony, without any knowledge then of its previous history, save that there had been a colony somewhere on the coast of Darien, and that it had been cruelly made to fail.

As I was the only European who had ever crossed by the route I have proposed, and as the terror of the Darien Indians had been, for three

P R E F A C E.

THE interest excited by a Project which not only involves the mighty advantages to commerce, by which Columbus was attracted, on his first voyage, to shorten the road to the East; but also has for its ultimate scope and tendency the enduring PEACE TO ALL NATIONS, by making it a necessity as well as an advantage to avoid disputes, induces me to publish another Edition of “The Isthmus of Darien Ship-Canal.”

In doing so, I have made no change in the matter; but have, by an alteration in the arrangement of the text, endeavoured to place the facts in a more clear and lucid order before the reader.

above purpose, has been a complete corroboration of my statements, and the formation of a Company (The Atlantic and Pacific Junction Company) for the carrying out of this great undertaking.

EDWARD CULLEN.

302, *Strand*, Feb. 23, 1853.

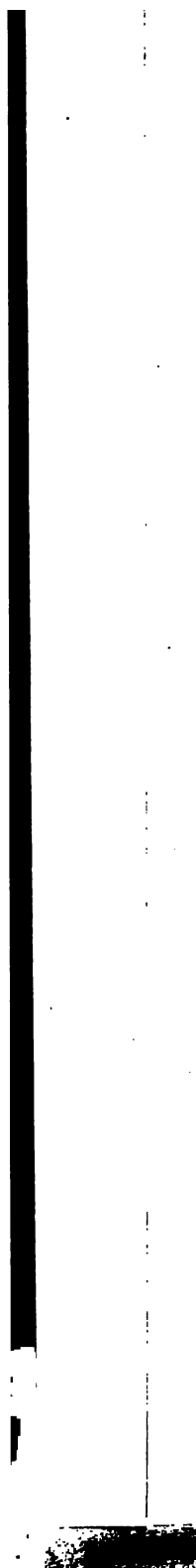
centuries, so prevalent along the whole length and breadth of Terra Firma, I found it impossible to induce any one to accompany me in my subsequent journeys in 1850 and 1851, and consequently had to contend, in England, against the enormous difficulties necessarily to be encountered in my early attempts to bring forward a project of such magnitude, supported only by my own statements, which appeared the more singular, from the extraordinary fact of this tract of country having remained totally unknown and unexplored up to the period of my first journey to Darien.

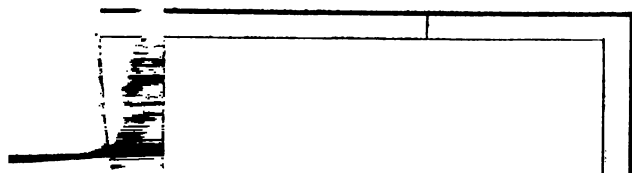
Upon my return to England, in December, 1851, Sir Charles Fox, Mr. Henderson, and Mr. Brassey, upon a minute and careful examination of my Topographical Map, entered into an agreement with me, whereby they engaged to send out engineers to verify my observations (whilst I proceeded to Bogota to obtain the concession of the territory from the Government of New Granada): the result of the expedition, dispatched for the

above purpose, has been a complete corroboration of my statements, and the formation of a Company (The Atlantic and Pacific Junction Company) for the carrying out of this great undertaking.

EDWARD CULLEN.

302, *Strand*, Feb. 23, 1853.





ISTHMUS OF DARIEN SHIP CANAL.

COMMERCIAL ADVANTAGES OF A SHIP CANAL ACROSS THE ISTHMUS OF DARIEN.—A moment's glance at the map of the world must convince the most sceptical of the immense advantages that would accrue to the commercial world by opening a Ship Canal Communication between the Atlantic and Pacific Oceans. Not only are these advantages universally acknowledged and appreciated, but the time is fast coming when a ship canal will not only be desirable, but actually indispensable. The necessities of commerce even now demand that the two oceans should be connected in such a way that ships can freely pass from one to the other, without going round Cape Horn or the Cape of Good Hope, and these necessities must in some way be met.

Not only would all the commerce to the western shores of America pass through the proposed canal, but, after its opening, no voyages would be made round the Cape of Good Hope to any place eastward of Cape Comorin or Ceylon, as the Coromandel Coast of India, China, and Australia would be much more accessible, in either monsoon, by the Darien Canal than by the present circuitous route, and the voyage out and home, or to and from India and China, could be made within one tropic, whilst, at present, a vessel must pass four times through each tropic in a single voyage out and home.

As regards passages to and from the west coast of North or South America, it will be sufficient to mention, that to pass from Chagres to Panama, for instance, by sea, it would be necessary to sail from 9° N. latitude to 55° S., in order to weather the stormy Cape Horn, and to return up the west coast to 9° N. on the Pacific side; thus going over sixty-four degrees of latitude on the Atlantic, and sixty-four degrees on the Pacific side, or 7,680 miles, unnecessarily, on a single passage, or 15,360 miles on a voyage to and from: and besides this enormous circuit, it must also be taken into account that, on such a passage, a vessel must run off to the E. as far as 30° W. long., in order to avoid the coast of Brazil, and must beat down, both in the Atlantic and Pacific, against the S.E. trade-wind—in the former when bound from Chagres to Panama, and in the latter when bound from Panama to Chagres. Moreover, the terrific storms from the west often experienced off Cape Horn, might delay her passage into the Pacific for weeks.

In a passage to China by the proposed Canal, a vessel, having cleared its Pacific terminus, would at once enter into the tract of the N.E. trade-wind, which blows between the parallels of 10° and 23° N.; and her course being west, she would be carried with a fair, steady breeze directly to her destination: in like manner, a vessel bound to India would pursue her course under the same favourable circumstances as far as long. 140° E., when she would enter the region of the monsoons, where should the S.W. monsoon blow (as it does from April to September), she could enter it so well to windward, that it would put her but little out of her course, from its eastern edge to the Straits of Malacca, whilst from those straits to Calcutta it would be a fair wind.

On the return voyage from China or India to the entrance of the Canal, a ship would at once run up to between 30° and 40° N., so as to be clear out of the region of the N.E. trade, and avail herself of the strong west winds which prevail between those parallels, to steer an east course to the coast of Mexico, where she would meet the north land-wind, which would carry her with a flowing sheet down to the Isthmus.

On a passage out to Australia, a ship would, after leaving the Canal, enter a narrow tract extending from 10° to 4° N., in which the winds are variable; after having crossed this, she would enter the region of the S.E. trade, which, as her course would be about W.S.W., would be a perfectly fair wind. Having passed the southern limit of this wind in 23° S., she would enter the region of the N.W. wind, which would also be a favourable breeze.

On her return from Australia to the Canal, she might at once run up into the S.E. trade, in lat. 23° S., from whence her course being about E.N.E., she would have a perfectly fair wind all the way; or she might run down part of her easting within the limits of the N.W. wind, and then run up into the S.E. trade, by doing which she would have the wind a couple of points more free.

Thus vessels bound either to or from India, China, and Australia, would have such fair, steady, regular winds, that their arrivals might be calculated upon with precision and accuracy.

The junction of the two great oceans, approximating, as it were, the two hemispheres, is a project worthy of the energy, the resources, and the enterprise of Britain, and calculated to immortalise any company under whose auspices it may be accomplished; and no commercial specu-

lation has ever been entered into which will confer such great and lasting benefits on mankind, carrying, as it would do, commerce and civilisation to the remotest corners of the earth. It has long been a desideratum, and now engrosses the attention of the mercantile world.

“ We are now upon the dawn of an extension of commerce in the direction of the Pacific, which will work some of the greatest wonders that have yet been witnessed from the energies of mankind.”¹ Already have two vast tides of emigration commenced, which will tend to equalise the distribution of the inhabitants of the globe—one of Europeans and North Americans to California and Australia, and one of Chinese to the western shores of America; and it may reasonably be expected, that ere long the cultivation of the West Indies will receive a stimulus from an immigration of Chinese.

The vast saving of time, by the adoption of this passage, which will enable ships to make two or three voyages in the same period that they now take to make one, of expense in their navigation, of wear and tear, of interest on the value of ship and cargo, of insurance on ship, cargo, and freight, and the great diminution of shipwrecks and loss of life by sea, will effect a complete but peaceful and beneficial revolution in commerce.

Not only will a great saving of time be effected by the direct diminution of the distance to be traversed between Europe and America, and the east and west shores of the Pacific, and *vice versa*, but also by the avoidance of the loss of time occasioned by calms in the low latitudes, hard gales off the Capes, and the very long tacks to the Eastward and Westward, beating against the S.E. trade-wind in

¹ “Times.”

the South Atlantic, or the N.E. or S.W. monsoon in the India or China seas, which vessels are now obliged to make; whilst, by the proposed route, fair steady breezes, smooth seas, and pleasant weather throughout the voyage both out and home, may be safely calculated upon.

Nor are the benefits resulting from increased intercourse and proximity the only advantages which may be hoped for: the safety of life and property will be greatly increased; the hardships of thousands of mariners will be lessened to an incalculable extent; and the facilities for benefiting our fellow-creatures will be greatly multiplied.

Ere long, Darien will become the great inter-oceanic portal, the *entrepôt* of the world, the storehouse of nations, the grand highway of commerce.

The *Sun* of October 12th, 1850, says, "Before a very considerable time has elapsed, the intention of England and America will have been carried into effect; and then will be seen the extraordinary benefits accruing to both from opening a line of communication—not inappropriately designated, the Dardanelles of the Western Hemisphere. As yet, any large speculation upon the consequences of that great work would only seem to partake of romance and exaggeration. Yet a little serious thought can only serve to assure the most cautious and reflective, that the dreams of the most extravagant imagination are in a fair way of being eclipsed by reality—a new road must be opened to the East for England."

The ignorance of a good route—the jealousy of rival nations—an erroneous idea that there was something too stupendous in the undertaking—a very strong prejudice that the difference of the level of the oceans, and of their rise of tide, would be a fatal objection—a most exaggerated

notion of the unhealthiness of the Isthmus—which is local and endemic, or fixed, in a few distinct localities, and does not pervade the whole Isthmus, and the futile attempts to effect a north-west passage through the ice of the polar seas, on which so much treasure and so many lives have been wasted, have hitherto prevented any attempt to cut through that narrow neck of land, and thereby, as it were, approximate the two hemispheres. Certain am I, however, that an attentive examination of the subject will prove how small is the amount of work required to be done on this route; and that in cutting a canal in Darien, but little more difficulty exists than in the execution of a similar work in England.² Considering the present resources of engineering science, I may venture to predict that ere long will be accomplished a work that has been talked of for three centuries, but never yet seriously or practically attempted, a work that will be the grandest effort of engineering science, and the surest basis on which to rest the hopes of the future establishment of universal peace and the brotherhood of nations, forming as it will, the neutral ground and place of congress, on which the nations of the earth will meet in peace.

As it may not be uninteresting to compare the opinions of the older writers on inter-oceanic communication, with those of the more modern, and to give a slight sketch of the history of the negotiations on the subject, I may be per-

² The Forth and Clyde Canal, of thirty-five miles in length, with a summit level of 160 feet, which had to be carried through moss, quicksand, gravel, and rocks, over precipices, and across valleys; in the course of which, besides smaller ones, eighteen drawbridges and fifteen aqueducts, with several tunnels, had to be constructed, was commenced in 1768, by Mr. Smeaton, and completed in 1790, at a cost of £200,000. Compare this with the almost total absence of difficulties of the route proposed.

mitted to lay before the reader the following quotations and comments on them. A writer in the "Edinburgh Review," Jan. 1809, vol. xiii., p. 283, says—

"We are tempted to dwell for a moment upon the prospects which the accomplishment of this splendid but not difficult enterprise opens to the nation. It is not merely the immense commerce of the western shores of America, extending almost from pole to pole, that is brought, as it were, to our door; it is not the intrinsically important, though comparatively moderate, branch of our commerce, that of the South Sea whalers, that will alone undergo a complete revolution, by saving the tedious and dangerous voyage round Cape Horn: the whole of those immense interests which we hold deposited in the regions of Asia, become augmented in value to a degree which, at present, it is not easy to conceive, by obtaining direct access to them across the Pacific ocean. *It is the same thing as if, by some great revolution of the globe, our Eastern possessions were brought nearer to us.* The voyage across the Pacific, the winds both for the Eastern and Western passage being fair and constant, is so expeditious and steady, that the arrival of the ships may be calculated almost with the accuracy of a mail coach.

"Immense would be the traffic which would immediately begin to cover that ocean, by denomination Pacific. All the riches of India and China would move towards America. The riches of Europe and America would move towards Asia. Vast depôts would be formed at the great commercial towns, which would immediately arise at the two extremities of the Central Canal. The goods would be in a course of perpetual passage from the one depôt to the other, and would be received by the ships, as they arrived, which were prepared to convey them to their ultimate destination."

Twenty years previous to this date, this same project of a Ship Canal formed one of the most earnest aspirations of the great mind of William Pitt, who received with *empressement*, in 1790, the proposals addressed to him on the subject by General Miranda, as a means to the emancipation of the Spanish colonies and a furtherance of British commerce in the Southern and Eastern seas. We are enabled also to trace, a few years later, in the archives of the Foreign Office, a proposition from the same party, that the United States should send a joint armament of 10,000 men, with a fleet from Great Britain, to take possession of the Isthmus of Darien, and open roads and canals through it for the united commerce of both nations, thus preludeing the treaty of Nicaragua, of which the statesmen of our days are so justly proud.

A writer in the Edinburgh Review (vol. xvi., p. 96) speaking

of "the celebrated colony of New Caledonia, founded by our unfortunate countrymen in the latter part of the seventeenth century, and most scandalously sacrificed by their rulers to the jealousy of the Dutch and English," says, "It is singular enough that these adventurers should have happened to select for their settlement the only point where a communication between the two seas seems practicable. It is melancholy to reflect, and idle to enlarge, upon the perfidious and narrow policy to which this magnificent project was sacrificed. Had the settlement founded by our countrymen been maintained for a few years only, the Succession War, which almost immediately followed, would have secured to us the firm possession of the country, and opened to us an intercourse with the South Sea, which the House of Bourbon, our inveterate enemies, would never have been able to have shut against us."

"The most ardent imagination," says Mr. William Davis Robinson, a United States merchant, writing in 1821, "would fail in an attempt to portray all the important and beneficial consequences that would result from the execution of this work, the magnitude and grandeur of which are worthy the profound attention of every commercial nation. It is indeed a subject so deeply and generally interesting, that the powerful nations of the old and those of the new world, should discard from its examination all selfish or ambitious considerations. Should the work be undertaken, let it be executed on a magnificent scale; and, when completed, let it become, like the ocean, a highway of nations, the enjoyment of which shall be guaranteed by them all and which shall be exempt from the caprice or regulations of any one kingdom or state."

I have inserted these opinions, to show that the advantages mentioned are likely to result from the construction of a Ship Canal are not put forth to aid a new speculation, but are the recorded convictions of all enlightened minds during the last half century.

In the appendix to Sir J. Dalrymple's memoirs, the following passage occurs in an "Account of an intended expedition into the South Seas, by private persons in the late war." "Vessels meet with a southland wind from the southmost point of Chili, all the way to the Bay of Panama. This wind never varies, carries ships above a hundred miles a day, and the tract in which it runs reaches a hundred leagues off the coast to the west. From the Bay of Panama, ships are carried to the East Indies by the great trade wind, at above an hundred miles a day. This is the tract of Spanish ships, from their dominions on the South Seas, to their possessions in the Philippine Islands. From the East Indies to the South Seas there are two passages; one by the North, to sail to the latitude of 40° North, in order to get into the great west

wind, which about that latitude blows ten months in the year ; and which, being strong, carries vessels with quickness to the Northern part of the Coast of Mexico. From the extreme point of Mexico, in the North, there is a land wind which blows all the way to the Bay of Panama, from the North to the South, precisely similar in all respects to the land wind which blows along the Coast of Chili to that Bay, from the South to the North. This first tract into the latitude 40° North, and then along the Coast of Mexico, is the route which the Acapulco ships take in coming from the Philippines to the South.

“The other route from the East Indies is by the South, to get into the latitude of 40° South, or New Holland, and from thence to take advantage of the great west wind, which, about that latitude, blows ten months of the year, in order to reach the Southern part of Chili, where the southland wind will be found. The facility of this last route was not known till the late discoveries of Captain Cook.”

The voyage from Manilla to Acapulco has frequently been made by dull-sailing Spanish ships in seventy-five days, and at certain seasons of the year it has been performed by vessels whose top-gallant-sails were not once taken in during the voyage. Violent storms are seldom experienced in the Pacific, excepting in the vicinity of Cape Horn, and in the high latitudes to the north-west.

In a letter from an experienced naval officer to the *Times*, dated November 28th, 1850, the following passages occur:—“The navigation from Suez to Ceylon is, of course, already well-known. That from Point de Galle to Swan River is open to this objection, viz., the frequency of hurricanes, which, at certain seasons sweep over the Indian Ocean, between the Isle of France and the west side of New South Wales, with frightful violence, and through which, as I can testify from experience, numbers of our finest ships have at various times suffered serious damage, while not a few have been totally lost.

“From Swan River to King George’s Sound, and Adelaide, and indeed along the whole southern coast of New South Wales, violent winds almost constantly prevail from the westward, causing a prodigious sea to arise, which nearly precludes any navigation in that direction ; and which, I am of opinion, would be a cause not only of frequent irregularities in the arrivals and departures of the vessels between those ports, but of annoyance and discomfort of the passengers.

“That by the Cape of Good Hope, which at present forms the ordinary mode of transit.

“The principal, and indeed only, objections to it that I know of are the high seas and boisterous weather, which are the almost constant attendants upon those high latitudes, between the Cape

of Good Hope and Sydney. The gales of wind, nearly without any variation throughout the year, from N.W. to S.W., render the return passage between those two ports a matter of very great uncertainty, and prove a source of exceeding discomfort to everybody on board, while in spite of the finest vessels and best nautical skill, they further cause frequent delays and irregularities in the voyages.

"The last line to be examined is that by the Isthmus of Panama.

"Throughout the entire range of this route across the vast Pacific Ocean, both going and returning between Panama, New Zealand, and Sydney, fine weather, smooth seas, and a pleasant temperature almost every where prevail; and the trade-winds, generally speaking, blow with such gentle force and constant regularity that the seaman acquainted with them is enabled, even at the present time, to shape his course from port to port with certainty and confidence, thereby enabling him even without the advantage of steam, to calculate upon his arrival with accuracy and precision.

"In looking upon the advantages of establishing a line of steam communication to New South Wales by the Panama route, the important point must not be overlooked of its being a resource in the event of any interruption to our communication with India by the Isthmus of Suez; a point indeed, which I consider ought to form matter of the highest consideration.

"The distance by this line is likewise a consideration. It is shorter than that by any of the others, being only 12,690 miles."

Extract from the *Times*, of Wednesday, December 11th, 1850:—"The letter in the *Times* to-day on various steam routes to Australia, has attracted attention from the practical nature of its statements. It tends to confirm all the arguments that have lately been put forward with regard to the complete superiority of the western line from Panama to Sydney, and has increased the unfavourable feeling with which the leading persons interested in the welfare of Australia have long regarded the strange want of decision shown by the government on this important question. While the attention of the whole world is turned to the Pacific Ocean, and to the vast commercial benefits that are destined to arise from the extension of enterprise in that direction, the sole object with our ministers seems to have been to carry the route through the Indian seas (where the development of our traffic calls for no extraneous aid), at an alleged additional cost, as compared with the Pacific route of at least twelve days in time, and 100 per cent. in the charges for freight and passage, besides unnecessary risk and inconvenience."

"During the administration of William Pitt, various projects

were presented to him, tending to shew the feasibility of cutting a canal through the Isthmus sufficiently wide and deep to admit vessels of the largest size ; and it is well-known that this statesman frequently, among his private friends, spoke with rapture on this subject, and that it constituted one of the great considerations in his mind when forming his plans for the emancipation of Spanish America."—*Robinson's Memoirs of the Mexican Revolution*, 1821.

In the instrument drawn up in 1797, by the Deputies or Commissioners from Mexico and the other principal provinces of South America, who met General Miranda at Paris, for the purpose of agreeing to and placing it in the hands of the British Government, the sixth article stipulates for the opening of the navigation between the Atlantic and Pacific Oceans by the Isthmus of Panama, as well as by the Lake of Nicaragua, and the guarantee of its freedom to the British nation.

Mr. Pitt agreed to the proposal, to which a further addition was made on the 17th October, 1798, by which the United States were to come into the alliance, and to find 10,000 troops, and the British Government agreed to find money and ships. A delay on the part of President Adams prevented the execution of the project ; but it was not lost sight of, for three years later, in 1801, the project was revived under Lord Sidmouth, the plans of government for South America approved, the military operations sketched out, and the expedition actually in preparation. These were put an end to by the Peace of Amiens. Again in 1804 Mr. Pitt resumed the plan, and zealously pushed it forward ; and Lord Melville and Sir Home Popham were engaged with General Miranda in arranging the details, when the affairs of Europe and the new coalition of the Sovereigns interfered to prevent it, and Miranda was driven to strike a blow for himself, in the expedition to Caraccas, where he nearly met the fate of William Paterson, by the sudden withdrawal of all support on the side of the West Indies, where he had been led to expect it. The blow first struck by Miranda was followed up by Simon Bolivar, who finally liberated Colombia, Ecuador, and Peru from the yoke of Spain.

IGNORANCE RESPECTING DARIEN.—It is a very singular circumstance that the Coast of Darien, the first settled in America, (Santa Maria having been founded in 1509, and Agla in Caledonia Bay in 1514) within eighteen days' steaming from England, close also to such frequented ports as Chagres, Carthagena, and Kingston, Jamaica, should be at the present day as unknown as

the Coasts of Patagonia or of New Guinea, and that the vast advantages of this tract of country, for a canal, should have escaped the penetration of the great Humboldt, who, after having examined all the maps in the Deposito Hydrographico of Madrid, appears to suggest the Chuquanaqua. He says, "On the Pacific Coast also, the deep Golfo de San Miguel, into which falls the Tuyra with its tributary, the Chuchunque runs far into the Isthmus; the river Chuchunque too, in the upper part of its course, runs within sixteen geographical miles of the Antillean shore of the Isthmus, westward of Cape Tiburon."—*Views of Nature*, Potsdam, June, 1849, p. 432 of Bohn's translation.

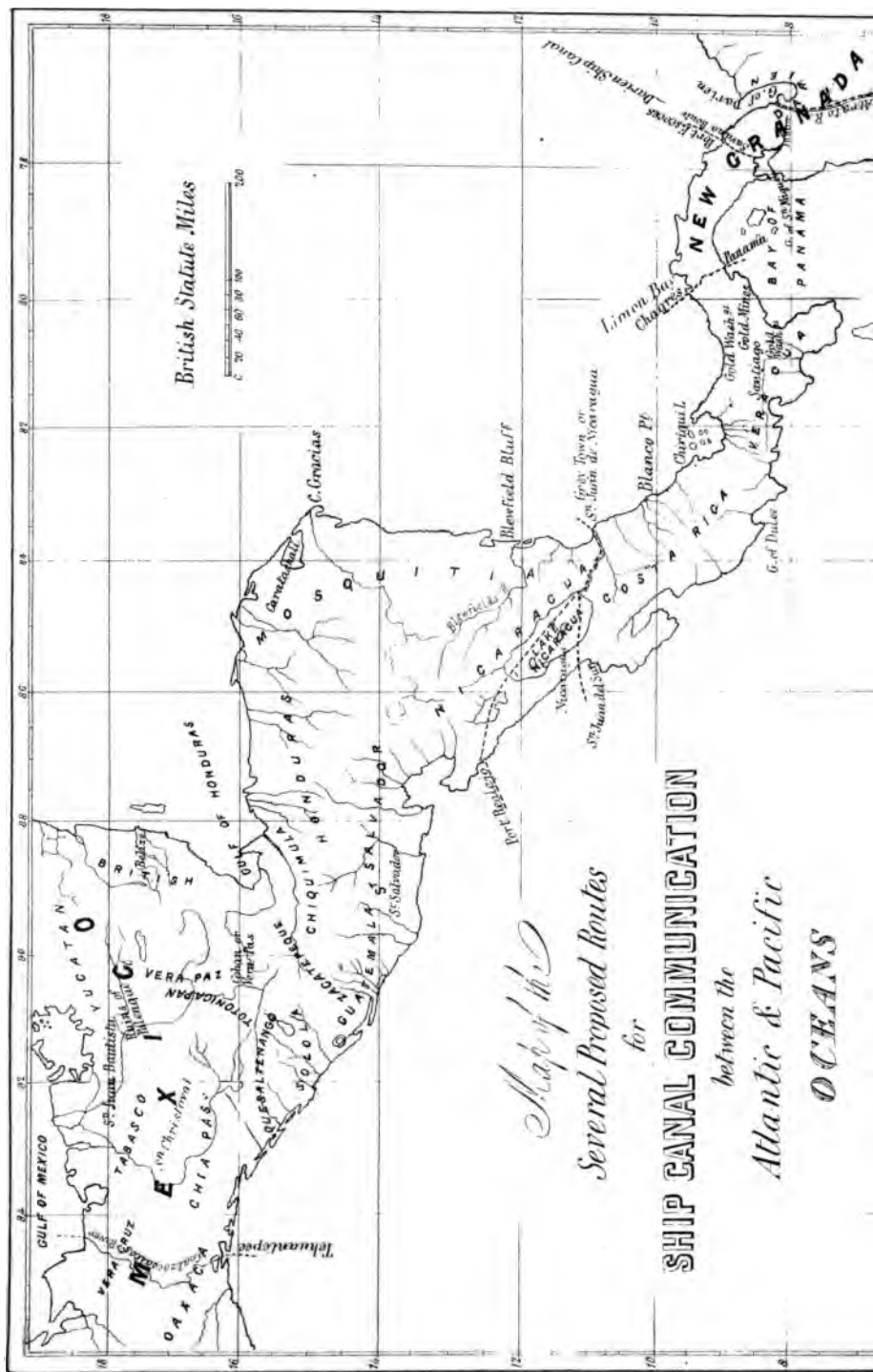
OTHER ROUTES PROPOSED.—The respective lengths of the several proposed routes are as follows:—

| | Miles. |
|--|--------|
| The Tehuantepec route (Mexico) - - - | 198 |
| The Nicaragua route, from San Juan del Norte to Brito (Disputed Boundaries) - - - | 194 |
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None of the above routes, except the last, have good harbours, without which it would be a fruitless waste of money to cut a Canal; and among many other objections to the first two, political difficulties exist in reference to the countries through which they would pass.

The TEHUANTEPEC route has no harbour³ on either coast.

³ "It is necessary to remark," says Captain Fitzroy, R.N., *Journal of the Royal Geographical Society*, vol. xx. p. 165,



be deepened and dredged, 91 miles. Total length of work to be done, 138 miles.

Could not be made navigable for large ships, say of 1,000 tons burthen.

Proposed depth, 17 feet.

Time necessary for transit from sea to sea, through so many locks, six days and ten hours, at the quickest rate, Colonel Childs' estimate of 77 hours being calculated on the supposition that a vessel would be in course of continuous transit, both day and night, and that she would only spend 28 minutes at the passage of each lock.

Estimated cost of a canal 17 feet deep, 100 feet wide at bottom, with 28 locks, and 7 dams, \$31,538,319 55c. or £6,570,483.

Estimated cost of a canal 20 feet deep, £10,000,000.

Tornados and papagayos, or violent hurricanes, on the coasts.

Volcanos⁴ in a state of activity along the route.

deepening of river or other work necessary.

Can be made navigable for ships of the greatest draught of water.

Proposed depth, 30 feet.

Transit could be effected in six hours, or one tide.

Estimated cost of a canal with locks, and navigable for vessels of the greatest draught of water £4,500,000.

Estimated cost of a canal without locks, 30 feet deep and 140 feet wide at bottom, £12,000,000.

Coasts peculiarly exempt from storms and hurricanes. See pilot books and Captain Fitzroy.

No volcanos within some hundreds of miles.

⁴ The exemption of Darien from volcanic disturbance is remarkable. "It ought to be remembered," says Captain Fitzroy, "that the vicinity of Panama has not been known to

Earthquakes in neighbourhood.

Disputed territorial boundaries — concession in litigation — attempt to form a company failed — Promoters have forfeited their claim to the protection of Great Britain and the United States, the term of one year, allowed by the Bulwer and Clayton treaty, within which to commence operations, having expired.

Charter of incorporation from State of New York infringed, by incapacity to comply with the principal clause, viz., that the canal should be navigable for vessels of the greatest draught of water.

The ATRATO route labours under the disadvantage of a bad harbour, on the Pacific side, Cupica being of very small extent, and open to the S.W.; and the Atrato has a bar with only five feet of water on it, while the rise of tide in the Gulf of Darien is only two feet.

The CHAGRES, or Limon Bay and Panama route, surveyed in 1829 by Col. Lloyd and M. Falmarc, under a commission from the Liberator, Simon Bolivar, and subse-

None have ever been known to have occurred.

Concession from New Granada recognised by all Governments—term of one year, within which the Company is required by the concession, and by the Bulwer and Clayton treaty, to commence operations, unexpired—company formed.

Company provisionally registered, and will receive a royal charter of incorporation.

suffer from such disturbance. That district appears to be one of those limited tracts sometimes found in volcanic regions, on each side of which earthquakes and eruptions occur without affecting the central district. It does not appear, however, that there have been eruptions or violent earthquakes during the last few centuries in any part of the Isthmus usually called Darien."

quently by M. Garella, has such bad harbours, that the idea of a canal by that line has been totally abandoned.

The route from Chepo mouth to Mandinga Bay, proposed by Mr. Evan Hopkins,⁵ who attempted to survey it in 1847, for the New Granada Government, although the narrowest line across the Isthmus, being only twenty-seven miles across, from Chepo to Carti, has the disadvantages of bad coasts, a very high Cordillera, of from 2,000 to 6,000 feet elevation, and a large population of Indians.

The bar at the mouth of Chepo River is quite dry at low water, as is also a sand-bank which extends several miles out into the Bay of Panama; the part of the Atlantic coast on the other side is beset with reefs, shoals and kays, and is dangerous of approach.

Capt. Fitzroy, R.N., in his "Considerations upon the Great Isthmus of Central America," suggests a line from the upper course of the Tuyra to the Atrato, or the coast of Darien above its mouth, as an improvement of the route proposed by me; but this would be nearly twice

⁵ "Mr. Hopkins," says Capt. Fitzroy, p. 23, "was lately prevented by the Indians from ascending the Chepo River towards Mandinga or San Blas Bay; Mr. Wheelwright was also stopped there in 1837; and Dr. Cullen was likewise stopped by the aborigines while endeavouring to ascend the Paya river, that runs from near the mouths of the Atrato to the Tuyra, which falls into the Gulf of San Miguel."

I learned in Darien that Mr. Hopkins and Don Pepe Hurtado, a Granadian engineer, made a present of a scarlet military coat to an Indian on the Chepo, and that as soon as the Indian chief of the district learned it, he flogged the Indian who accepted the present, and summoned his people to arms, and Mr. H. and Don Pepe had to fly for their lives. Most probably the chief looked upon the acceptance of gaudy trappings as an acknowledgement of submission to foreigners. I have mentioned elsewhere my having learned subsequently that the reason of the Indians having stopped me was the fear of small-pox being introduced amongst them rather any dislike to foreigners.

the distance of the Port Escoscés, and Gulf of San Miguel route; there would be the mountain of Chacargun or the Sierra de Maly to cross (see page 58), and, should the canal open into the Atrato, there would be the very formidable obstacle of the bar to remove, while of the coast above the Atrato mouth, the "Columbian navigator" says, "all this coast from Tarena Kays to Cape Tiburon is high and precipitous, with deep water off it; and it is very wild in the season of the breezes. It is very advisable, therefore, at these seasons, to shun it." Any route however, in this direction, would be included in the privilege granted, on the 1st of June, 1852, by the New Granada Government, to Edward Cullen, Charles Fox, John Henderson, and Thomas Brassey, for cutting a canal from Port Escoscés to the Gulf of San Miguel, which gives power to select any place from the west mouth of the Atrato to Punta Musquitos, for the Atlantic entrance of the canal.

DISCOVERY OF THE SAVANA RIVER AND THE ROUTE FOR THE SHIP CANAL.—I imagine that the river Savana⁶ was not delineated in the maps which Hum-

⁶ Mr. Thomas Jefferys has marked out the Rio San Miguel, the next river to the west of the Savana, but has omitted the latter altogether. His West India Atlas (1762) was compiled from the draughts and surveys found on board the Galleons captured from the Spaniards. The Chuquanaqua is marked in the map of the Darien Scotch settlement and circumjacent county, prefixed to "A Letter, giving a description of the Isthmus of Darien," 4to., Edinburgh, 1699. It is remarkable, that some of the passages in this "Letter" are identical with Basil Ringrose's account of the Buccaneer's passage across the Isthmus, which I have quoted in page 46, and which I have taken from a MS. in the Ayscough collection (British Museum), by Basil Ringrose himself, illuminated with coloured portraits of Captain Andreas, "the Emperor of the Isthmus," "King Golden Cap," "the Darien Chief," and sketches of the houses, weapons, and ornaments of the natives.

boldt saw.⁷ Such, indeed, was the case with the map which I had on my first journey into Darien in 1849, so that I was totally ignorant of its existence, until I actually saw it, after entering Boca Chica, when finding the great depth of water at its mouth, and that it flowed almost directly from the north, I became convinced that I had at last found the object of my search, viz., a feasible route to the Atlantic, and thereupon immediately ascended it, and crossed from Cañasas to the sea-shore at Port Escoscés and back, and subsequently, in 1850 and also in 1851, crossed and recrossed, at several times and by several tracks, the route from the Savana to Port Escoscés and Caledonia Bay, notching the barks of the trees as I went along, with a *macheta* or cutlass, always alone and unaided, and always in the season of the heaviest rains. I had previously examined, on my way from Panama, the mouths of Chepo, Chiman, Congo, and several other rivers, but found them all obstructed by bars and sandbanks, and impracticable for a ship passage, so that upon seeing the Savana, I had not the least hesitation in deciding that that must be the future route for inter-oceanic communication for ships.

⁷ This I attribute to the jealousy of the Spaniards, who were careful to withhold any information that might lead the English to the discovery of an easy communication between the two seas. Alcedo, in his "Diccionario Historico de las Indias Occidentales," says that it was interdicted, *on pain of death, even to propose* opening the navigation between the two seas. "En tiempo de Felipe II. se proyectò cortarlo, y comunicar los dos mares por medio de un canal, y a este efecto se enviaron para reconocerlo dos Injiniéros Flamencos, pero encontraron dificultades insuperables, y el consejo de Indiàs representò los perjuicios que de ello se seguirian a la monarquia, por cuya razon mandò aquel Monarca que nadie propusiese ó tratase de ello en adelante, *pena de la vida*." The navigation of the Atrato, also, was interdicted, on pain of death.

THE DARIEN CANAL ROUTE.—Port Escoscés or Scotch Harbour, and the Bay of Caledonia, on the Atlantic coast of the Isthmus of Darien, present an extent of six nautical miles, from S. E. to N.W., of safe anchorage in all winds. These harbours are situated between Carreto Bay and the channel of Sassardi, and are 140 miles E.S.E. of Limon Bay, and twenty-one miles W.N.W. of Cape Tiburon, the N.W. boundary of the Gulf of Darien. Port Escoscés extends to the S.E. to lat. $8^{\circ} 50'$ and long. $77^{\circ} 41'$; and Golden Island, or Isla de Oro, or Santa Catalina, which forms the N.W. boundary of Caledonia Bay, is in lat. $8^{\circ} 54' 40''$, and long. $77^{\circ} 45' 30''$.

The channel of Sassardi, also, extending from Caledonia Bay N.W. five miles, to the Fronton, or point of Sassardi, is sheltered from the winds and seas of both seasons, and has good depth of water.

Twenty-two miles S.W. of Port Escoscés is the site of the old Spanish settlement of Fuerte del Principe, on the river Savana, established in 1785, and abandoned in 1790. From thence the river Savana has nearly a S. by E. course for fourteen miles to its mouth, which opens into the river Tuyra, Santa Maria, or Rio Grande del Darien, three miles above Boca Chica and Boca Grande, the two mouths by which the latter discharges itself into the Gulf of San Miguel on the Pacific.

Thus the distance from the Atlantic to the Pacific Ocean, by the route from Port Escoscés or Caledonia Bay, to the Gulf of San Miguel, by way of the river Savana, would be thirty-nine miles. In a direct line, from Port Escoscés to the Gulf, the distance is thirty-three miles.

In "Considerations on the great Isthmus of Central America, read before the Royal Geographical Society of

Palmerston. By such a Canal—that is, one entirely without locks—the transit from sea to sea could be effected in six hours, or one tide.⁹

For the engineering details, and estimates of the cost of the work, I beg to refer to the valuable Report* of Mr. Lionel Gisborne, C.E., who, with his assistant, Mr. Forde, was commissioned, last April, by Messrs. Fox, Henderson, and

⁹ “It is ascertained,” says Captain Fitzroy, “that there is only a trifling difference between the levels of the ocean at this Isthmus. A rise of tide not exceeding two feet is found on the Atlantic side, while in Panama Bay the tide rises more than eighteen feet; the mean level of the Pacific in this particular place being two or three feet above that of the Atlantic. It is high water at the same hour in each ocean” (p. 17).

Colonel Lloyd says that the Pacific at high water is thirteen feet higher than the Atlantic, while the Atlantic is highest at low water by six feet. Baron Humboldt said, in 1809, “the difference of level between the Caribbean Sea and the Pacific Ocean does not probably, exceed nine feet; and at different hours in the day sometimes one sea, sometimes the other is the more elevated.” But this difference would be no hindrance, but, on the contrary a most important advantage in a Ship Canal, since it would create a current from the Atlantic to the Pacific during the ebb, and one from the Pacific to the Atlantic, during the flood tide of the Pacific, and these alternate currents would enable each of the fleets to pass through at different times, those bound from the Atlantic to the Pacific during the ebb-tide of the latter, and those from the Pacific to the Atlantic during the flood-tide of the former. This arrangement in the periods of transit would afford many advantages, such as obviating the meeting of the vessels and the necessity of their passing one another, and preventing their accumulation or crowding together in the canal, as each fleet could be carried right through in one tide, if not by the current alone, at least with the aid of tug steamers. The alternation of the currents would have the further beneficial effect of washing out the bed of the canal, and keeping it free from the deposition of sand or mud, so that dredging would never become necessary; and would also render the degree of width necessary for the canal less; though I do not reckon this to be a point of moment, as the wider and deeper it is cut the better, and the work once finished will last to the end of the world, since the natural effect of the alternate currents will be a gradual process of deepening and widening, which will convert the canal into a STRAIT.

* In Appendix.

Brassey, to survey this route, which they found to be perfectly feasible for a Ship Canal communication, and fully as eligible as I had represented it.

It is needless to say, that, under the auspices of Messrs. Fox, Henderson, and Brassey, who, with that clear discernment and prompt decision, which have placed them in the elevated position which they occupy, adopted this route in December 1851, after a careful examination of my statements, the great work of an inter-oceanic canal is sure, ere long, to be accomplished.

I trust that an attentive consideration of the advantages of this route—viz., its shortness, the excellence of its harbours, the low elevation of the land, the absence of bars at the Savana and Tuyra mouths, the depth of water and great rise of tide in the former, its directness of course and freedom from obstructions, the healthiness of the adjacent country, the exemption of the coasts from northers and hurricanes, the feasibility of cutting a canal without locks, and the absence of engineering difficulties—will fully justify me in asserting it to be the shortest, the most direct, safe, and expeditious, and in every way the most eligible route for intermarine communication for large ships.

An examination of the physical aspect of the country from Port Escoscés to the Savana—presenting, as it does, but a single ridge of low elevation, and this broken by gorges, ravines, and valleys, and grooved by rivers and streams, with a champaign country extending from its base on each side—will prove the feasibility of making the Canal entirely without locks, a superiority which this route possesses over others, which all present insurmountable physical obstacles to the construction of such a Canal.

In fact, a glance at the map ought to convince the most

sceptical that nature has unmistakeably marked out this space for the junction of the two oceans, and the breaking of the continuity of North and South America; indeed, so narrow is the line of division, that it would almost appear as if the two seas did once meet here.

DETAILS OF THE ROUTE PROPOSED.—I shall now enter into a more detailed description of this route, which I discovered in 1849, and proposed for a Ship Canal communication between the Atlantic and Pacific Oceans, in the *Panama Echo* of February 8th, 1850, in the *Daily News* and *Mining Journal* of May, 1850;¹⁰ in a paper presented to the Royal Geographical Society, and read at the Edinburgh Meeting of the British Association, in July, 1850; and in a Report to Lord Palmerston, of January 15th, 1851.

This Report was acknowledged by his Lordship in the following letter:—

(Copy).

“*Foreign Office,*

“*January 28th, 1851.*

“SIR,

“I am directed by Viscount Palmerston to acknowledge the receipt of your letter of the 15th instant, inclosing a Report upon the subject of your plan for the construction of a Canal to join the Atlantic and Pacific Oceans, by way of the river Savana; and I am to request that you will put in writing your ideas as to what you consider the best course for the purpose of carrying your plan into execution.

“I am,

“Sir,

“Your most obedient, humble servant,

“H. N. ADDINGTON.

“*Dr. Cullen, Broad-street Buildings.*”

¹⁰ And subsequent Months, in a controversy with Evan Hopkins, Esq., C.E. & M.E.

PORT ESCOSCÉS.—Of Port Escoscés, Caledonia Bay, and the Channel of Sassardi, the *Colombian Navigator*,¹¹ vol. 3, p. 218, says :—

“Port Escoscés, or Caledonia, lat. $8^{\circ} 51'$, long. $77^{\circ} 44'$, is a noble harbour; very safe, and so extensive, that a thousand sail of vessels may enter it.¹²

“Punta Escoscés is the S.E. point of Caledonia Bay, the greater islet of *Santa Catalina*, or *de Oro* (gold), being the N.W. Between point and point the distance is four miles, and the points lie N.W. and S.E. ($N. 40^{\circ} W.$, and $S. 40^{\circ} E.$), from each other; and in respect to this line, the Bay falls in one mile and two-thirds. In the S.E. part of this bay is *Puerto Escoscés* (or Scottish Harbour), which extends inward two miles in that direction, and forms good shelter. There are various shoals in it, which are represented in the particular plan of the harbour, by which plan any vessel may run in, for the depths are five, six, seven, and eight fathoms of water over a bottom of sand.

“Between Piedras Islet to the north, the west point of Aglatomate river to the south, and that of San Fulgencio to the S.W., is formed the Ensenada, or Bay of Caledonia, and the Channel of Sassardi.

CALEDONIA BAY.¹³—“The Ensenada, or Cove of Cale-

¹¹ By John Purdy, Hydrographer; printed for R. H. Lawrie, 53, Fleet Street, 1839.

¹² “At the place where we have settled” says the author of a letter in vol iii. “State Tracts of King William III.” “we have an excellent harbour surrounded with mountains, capable of holding a thousand sail, and land-locked and safe from all winds and tempests.”

¹³ In “A draft of y^e Golden and adjacent island with part of y^e Isthmus of Darien, as it was taken by Captain Jenefer, where y^e Scots' West India Company were settled, most humbly inscribed

donia, is, strictly speaking, formed by the points already mentioned, which lie with each other N.N.W. $\frac{1}{2}$ W., and S.S.E. $\frac{1}{2}$ E. (N. 25° W., and S. 25° E.), one mile distant. This Bay is clean, and has good deep water; the greater part of its coast is a beach, and near the middle of it, disembogues the river Aglaseniqua. The point of San Fulgencio is salient, scarped and clean, and it also forms an indent with little depth of water, bordered by mangroves and various Kays at its western part.

THE CHANNEL OF SASSARDI.—“Between San Fulgencio point, the great Oro Island, Piedras Islet, and the Mangrove Kays, which are to the west of them,

to John Haldane of Gleneagles, Esq., one of y^e Hon. Commissioners of Police Customs for North Britain,” the captain says “between y^e islands and y^e mainland there is very good ground where ships may be careened and anchor safe at six, seven, and eight fathom water. Here y^e English privateers landed when they marched overland to the South Sea.”

In the defence of the Scotch settlement, p. 62, we find the following account given by one of the settlers at the time :—“To the westward of the promontory at the entrance of the river (the Aglasenigua) is a fine sandy bay, with three islands, one of them Golden Island, lying before it, which make it an extraordinary good harbour. Golden Island is rocky and steep all round, except at the landing place on the South side, so that it is naturally fortified. The land of the Isthmus, over against it to the S.E., is an excellent fruitful soil.

“West of the Island lies the largest of the three, being swampy, and covered with mangroves.

“To the North of these lies the Island of Pines, covered with tall trees, fit for any use. From the point against these islands, for three leagues westward, the shore is guarded by rocks, so that a boat cannot land; but at the N.W. end of the rocks there is a very good harbour, and good riding, as has been said, in all winds, by some or other of these islands, which, with the adjacent shore, make a lovely landscape off at sea. The channel between them and the Isthmus, is two, three, and four miles broad, and navigable from end to end; and the ground opposite to them, with inland, an excellent soil, and a continued forest of stately timber trees.”

the Channel of Sassardi is formed; the S.E. entrance of this channel is off and on, with four cables' length in extent, from edge to edge, and with from nine to twelve fathoms depth on oaze; and farther in, from eight to ten fathoms; ás also between the turn of the bank off Piedras islet, and the Bay of Caledonia, the depth is from seven to fifteen fathoms; and the piece of sea which intervenes between this bay and the *Puerto Escoscés* is of a good depth of water; but at a short mile S.E. by E. $\frac{1}{2}$ E. (S. 55° E.), from Piedras Islet the sea breaks when the breeze blows fresh."

From its entrance the Channel of Sassardi extends N.W. five miles.

The engineer has here, then, a wide scope for selecting a locality for the Atlantic mouth of the canal, which may, thus, open any where from the S.E. end of Port Escoscés to the N.W. entrance of the Channel of Sassardi. an extent of eleven nautic miles.

Along a great extent of Port Escoscés and Caledonia Bay, vessels can lie so close in shore that no boats would be necessary in the taking in or discharging cargo; the same great advantage also presents itself at several points in the Channel of Sassardi.

Good fresh water may be obtained in abundance from any of the numerous streams which fall into these harbours, particularly from the Aglaseniqua or Aglatomate.

Port Escoscés is entirely uninhabited, nor is there any settlement inland of it; at Caledonia, near the mouth of the Aglaseniqua, there are five huts, inhabited by a few Indians of the Tule tribe, and about two leagues up the river is another small settlement; this, however, is

at a considerable distance westward of the projected line of Canal.

From the sea-shore a plain extends for nearly two miles to the base of a ridge of hills,¹⁴ which runs parallel to the coast, and whose highest summit is about 350 feet. This ridge is not quite continuous, and unbroken, but is divided by tranverse valleys,¹⁵ through which the Aglaseniqua, Aglatomate, and other rivers have their course, and whose highest elevations do not exceed 150 feet.

The base of this ridge is only two miles in width; and from its south side, a level plain extends for thirteen miles to a point on the River Savana, called Cañasas, which is about twenty miles above its mouth.

THE RIVER SAVANA, at Cañasas, has a depth of six feet of water, but is obstructed by ledges of a slate, called *pizarra* or *killes*, for four miles, down to the mouth of La Villa, up to which the tide reaches. At Cañasas, there is a forest of a species of bamboo,¹⁶ so dense as to be impenetrable; and above it there is a fall of two feet, when the river is low,

¹⁴ "These hills are clothed with tall trees without any underwood, so that one may gallop conveniently among them many miles, free from sun and rain, unless of a great continuance. The air makes on the top of the trees a pleasant and melancholy musick; so that one of the colony, considering the coolness, pleasant murmuring of the air, and the infinite beauty of a continued natural harbour, called them the Shades of Love."—*History of Caledonia*, 1699, p.15.

¹⁵ "The valleys are watered with rivers and perpetual clear springs, which are most pleasant to drink, being as soft as milk, and very nourishing."—*History of Caledonia*, 1699.

¹⁶ Humboldt points out the *Bambusa* (Bamboo) and *Heliconia* as exceptions to the loose disorder in which the different vegetable tribes are interspersed and blended together in the tropics; "these," he says, "form continued belts." I met such a belt in this locality, and was diverted some miles from my course by the necessity of rounding it, as I could not cut through it.

but after rains this entirely disappears. The first fall, in ascending the river, occurs at Caobano, a little above La Villa.

From La Villa, where there is a depth of ten or twelve feet, the river is perfectly free from obstructions down to Principe.

At Fuerte del Principe, two miles below La Villa, there is a single ledge of slate, visible only in a very low state of the river, which has here a depth of three fathoms, and a rise of tide of six feet. The banks of the river are elevated about ten feet above the level of the water, and are quite free from swamp. The site of the old Spanish settlement is here indicated by a patch of very dense scrubby bush, without high trees, on the west bank of the river; but the only remains to be met with are some fragments of *botijas*, or water-jars. Principe in lat. is $8^{\circ} 34'$, and long. $77^{\circ} 56'$ by my observations; it is only two or three hours' journey from the mouth of the river.

The Savana River, called by the Indians, Chaparti, is very direct in its course, from Principe to its mouth, and free from sinuosities, *playas*, deep elbows, shoals, rocks, snags or other obstructions.

Its banks, elevated several feet above the level of the water, are quite free from swamp, and malarious miasmata, consequently the endemic fevers caused by these in Chagres, Portobello, Limon and Panama, would not prevail in any settlements that may be formed in the neighbourhood of the Savana. Indeed it cannot be inferred that the Isthmus of Darien is unhealthy, because the towns on the Isthmus of Panama have all been settled in swampy localities, and in the most unfavourable positions in a sanatory point of view. A convincing proof of the freedom from swamp of

the whole tract of country, from Port Escoscés to the Gulf of San Miguel, is the total absence of musquitos, which invariably infest all swampy grounds in the tropics. The great longevity¹⁶ of the people of Darien, and the large proportion of very old men also attest the healthiness of the climate.

From Principe to the mouth of Matumaganti, one mile S.S.W., the river increases greatly in width and depth: there are some islands in this reach; and on the west bank, a very large cuipo tree stands conspicuous, towering above the adjacent forest.

From Matumaganti to the mouth of Lara, two miles, the river has a depth of four fathoms, and a rise of tide of ten feet.

From Lara mouth to the islands in the second reach, four miles, the river is very direct in its course, with a depth of five or six fathoms. A ridge of hills runs parallel to each bank, at about two miles' distance. Just below this mouth, and above a widening of the river, called Revesa de Piriaki,

¹⁶ "There was an old woman who cooked their victuals for them, and was very stirring about the house; she seemed to be near sixty (and was Ambrosios grandmother), but on asking her age we were informed she was *one hundred and twenty*; we could not believe it, and were persuaded they must mistake in the commutation of time, but an infallible demonstration they showed to us, the *sixth generation of this woman's body in the house*; which was indeed very surprising; and we were assured 'twas common amongst them to live 150 or 160 years, yet 'tis observed those of them *who converse often with the Europeans and drink their strong liquors are short-lived*."—*Scotch Darien Papers*.

There may be seen every day in the streets of Panama a negress who was born before the time of Admiral Vernon's expedition, and has five generations living with her; she walks about with the aid of a stick, and has an excellent memory; I refer to Dr. Autenrieth and Dr. Theller of Panama, who often converse with her, for the correctness of this statement. See elsewhere the declaration of Santa Ana Ceballos, 101 years of age.

is Cerro Piriaki, a hill of about 400 feet elevation, and above this there is no hill near either bank of the Savana. Above the islands, Estero Corotu, Rio Corredor, and other streams fall into this, the *Calle larga*, or Long Reach.

From the islands to Areti mouth, S.S.E., three miles, the river has great width and depth: a ridge of hill here runs along each bank, at about two miles' distance.

JUNCTION OF THE SAVANA AND TUYRA.—From Areti mouth to the junction of the Savana and Tuyra rivers, S., four miles, the river has a uniform width of two miles, and a depth of from eight to nine fathoms.

On the west bank of this reach is Punta Machete, with a small shoal above it, called Bajo Grande, and one below it, Bajo Chico. Both of these are close in shore, and oysters are found on them.

THE SAVANA MOUTH.—From the west point of the Savana mouth, in lat. 8°. 21', long. 77°. 54', the land rises into a ridge of hill of about 300 feet elevation, running N. for about four miles parallel to the river, from which it is separated by a strip of level land half a mile wide. There is a quebra, or rivulet in the ridge, called Laguada, which has plenty of fresh water in the driest season.

Behind Nisperal, the east point of the Savana mouth, there is a low ridge of hills; from the north bank of Iglesias, also, a narrow ridge follows the course of the Savana for about three miles. This is the Cerro Titichi, which gave its name to a mission of Indians at the mouth of the Chiquanaqua, the last survivor of whom is a man named Marcellino, who resides at Pinogana, on the Tuyra. On the north bank of Iglesias is Quebra de Tigre, and on the Savana, above its mouth, is Quebraita la Monera, where fresh water may be obtained.

At the mouth of the Savana there are nine fathoms, at low water, and the tide rises from twenty-one to twenty-seven feet.

BOCA CHICA and BOCA GRANDE, the mouths of the Tuyra, are perfectly safe entrances, and have a depth of thirteen to twenty fathoms of water respectively.

THE GULF of SAN MIGUEL has good depth of water, and would hold the shipping of the world. Its mouth, between Cape San Lorenzo on the north, and Punta Garachiné on the south, is ten miles across, and opens into the Pacific, quite outside the Bay of Panama. Its direction inward is N.E. fifteen miles to Boca Chica. Inside the Bay of Garachiné, the shores of the gulf approach each other, and the width diminishes to four miles, between Punta Brava and Morro Patiño, with a depth of from nine to twenty fathoms, but again increases, and then diminishes to Boca Chica.

Close to Cape San Lorenzo, is a small shoal, called El Buey, which may be easily avoided. There are several islands in the Gulf, as Iguana, Cedro, Islas de San Diègo, etc., etc., which are all safe of approach. On the north side, the rivers Congo, Buenavista; and on the south, the Moguey, Guaca, Taimita, and Sambù, open into the Gulf; while the Tuyra and Savana fall into its eastern end, the Ensenada del Darien, called by the Granadians "Boca de Provincia," or Mouth of the Province.

The best site in the Gulf for the erection of a light-house would be on Morro Patiño.

VEGETABLE PRODUCTS OF THE SOIL.—In the forest on this route many valuable varieties of woods¹⁸ are to be found, of which I may specify the following:

¹⁸ Messrs. Chalmer and Fleming, brokers, of Liverpool, in a highly-interesting work, published by them in 1850, entitled

Mora (*excelsa*) which towers to a height of 120 feet, is equal to teak, not subject to dry rot, and excellently adapted

"the Mahogany Tree," speak of the vegetable productions of the country: "Comparatively with the vast extent of this immense Isthmus, the whole may be said to be little known to Europeans. Its surface is covered with the densest forests of mahogany and other gigantic trees, with an underwood of many valuable tropical shrubs and plants, so matted together, that it is difficult for parties on foot to make a track into the interior. The soil of all these countries is, for the most part, exceedingly fertile. In the plains, and especially in the valleys, it is a dark rich mould, of alluvial formation, *which might serve as manure for lands in other parts of the world.* To this fertility of the soil, and to the gradations of temperature, may be attributed the variety and abundance of the productions, which embrace nearly all those of the West Indies, besides some that are peculiar to this country. Of these the most valuable are Indigo, Cochineal, Tobacco, Cocoa, Vanilla, and Wax, Sarsaparilla, Balsam of Peru, and the Amber Tree, Ginger, etc., which are staple commodities. Indian Corn, Rice, Yams, and Plantains, grow abundantly with little care. The Sugar Cane thrives luxuriantly, also the Coffee plant; and a species of Cotton grows wild, which the Indians manufacture into beautiful fabrics. A great variety of Medicinal Plants are collected, as well as Gums, Spices, and Balsams, amongst which the most in esteem are the Copal, Acacia, Quitini, Quapinal, Incense, Chira-ai, and the Gum of the Chesnut tree; and an oily substance is also extracted from the fruit of this tree, from which candles are made, as fine as those of white wax. The fruits of this region are also incomparably fine, being of every kind to be found in the West Indies; and almost all European vegetables can be raised without any trouble. But what is most important and worthy of all attention in these parts, is the extent of its vast and interminable forests, replete with the most valuable timber-trees already known to commerce, besides an infinite variety of woods desirable for the dyers, cabinet-makers, house and ship builders, the very names of which are scarcely known to botanists, although the Indians have taken advantage of them for their primitive manufactures, and for the construction of their canoes and warlike instruments, esteeming them for their hardness, tenacity, elasticity, or durability, according to their respective applications. Of the Dye-woods, it is scarcely necessary to mention Logwood, Fustic, Brazil Wood, and Nicaragua, already so well known. The San Juan and the Poro yield a beautiful yellow, and the Ammona Reticulata, though perfectly white, changes colour on being cut or slit, and yields a clear brilliant

for ship-building; its wood is so close and cross-grained, that it is difficult to split it.

Espave, a hard wood, adapted for ship-building.

Amarillo de Guayaquil, not subject to dry rot.

Roble, or oak, fit for ship-building.

Maderone, a durable wood, used for scantling.

Corotu, grows to a height of 100 feet; insects will not attack it.

Cedra Cebolla, or Onion Cedar, very durable; gives 36 feet pieces: insects will not attack it.

Tangare, like mahogany.

Cañassa, a species of bamboo, growing in very dense thickets.

Bongo, a cork wood.

Hobo, 120 feet high; hard and durable.

Balsas, a white cork wood, for rafts.

Alfahilla, for scantling—durable.

Yalla, very durable, and not subject to dry rot.

Red Mangrove, very durable, for ship-building.

Majagua, used by the Indians for making ropes.

Cucuwa, used for making mats and blankets.

Cedro Real, or Royal Cedar; very abundant.

Bombax Ceiba, or Silk Cotton tree, grows to a height of 100 feet; its wood makes excellent canoes.

red, which is easily extracted. But the productions of the forest are those which, in the first instance, must fix particular attention in this publication, more especially the trees of large growth. The following are such as are already well known to the wood trade in this port" (Liverpool), "and admit of their qualities and uses being thoroughly appreciated. They are—Oak, Ash, Beech, Cedar, Firs, Larches, Pitch Pines, Green Heart, Mora, Santa Maria, West India Teaks, Rosewood, Ebony, Satin-wood, Sabicue, Lignum-vitæ, Lance-wood, Spars, Maples, and Mahogany."

Liana, Vejucó, or Bush Rope; a species of vine which attains an enormous size, ascending the highest trees, passing from one to the other, and forming festoons many hundred feet long.

Besides these, Mahogany, Lignum Vitæ, Fustic, and Caoutchouc abound in the forest.¹⁹

The Caoutchouc and Fustic are very deserving of attention, and should further explorations reveal the existence of Gutta Percha, I should not be surprised.

Of medicinal plants, the Cedron deserves notice, as it has been found very valuable in intermittent fevers, and lately in cholera; the Indians consider it a specific against the effects of snake-bites.

Sarsaparilla, Vanilla, Honey, Wax, Vegetable Ivory, and several Gum Resins are among the vegetable products of Darien.

PLANTAINS attain a large size, and are fit to cut in nine months; Sugar Cane is cut in nine months; Indian corn ripens in three months, and all other tropical fruits are equally precocious.

¹⁹ To shew that there is a market on the Pacific for the woods growing in the Savana, I may instance a fact incidentally mentioned by Colonel Lloyd in his "Notes on the Isthmus of Panama." "On the banks of the Indio (a river falling into the sea about ten leagues east of Panama) an English gentleman, resident in Panama, has erected a saw-mill capable of sawing from fifteen to twenty thousand boards annually. An inexhaustible supply of the finest timber is in its immediate vicinity; and the *fertility of the soil where cleared, is such that a small portion, with the labour of two men only, affords an ample supply of every article of subsistence for the whole establishment.* Several roads lead to it from the neighbouring villages; and one has been formed from a place on the united stream of the Pacora and Indio, called Sambaja, where the largest class of vessels remain. The boards are rafted down the river and have a ready sale, not only in Panama, but also in Guayaquil and Peru, in the latter of which there is a scarcity of wood."

The Atlantic coast, for miles long, in various parts is lined with cocoa-nut trees; the Cocoa (*Theobroma Cacao*), of Darien, was considered by the old Spaniards, the best in South America.

COTTON.—In some of the villages of Darien, and at the mouth of Congo river, the Cotton Plant produces larger pods than any I have seen in Demerara or Berbice. I would consider the plains on the banks of the Savana, and between that river and the Cordillera of the coast, excellently adapted to the cultivation of Cotton on a large scale.

Sugar, coffee, cotton, cocoa, tobacco, indigo, sarsaparilla, vanilla, plantains, yams, cassava, and other products, which would flourish in this rich virgin soil, are amongst the most valuable in commerce, whilst the proximity to the canal would afford a ready market : oranges, shaddocks, limes, lemons, pine-apples, nisperos or sapodillos, bananas, and mangoes, are cultivated with success in the Indian settlements, and, no doubt, the vine and olive²⁰ would, if introduced, thrive equally well.

The bamboo, which grows in dense thickets, would be most valuable in the hands of Chinese artificers, who are skilful in applying it to a variety of useful purposes; it may be expected that, ere long, there will be an immigra-

²⁰ The Spanish Government always discouraged in its colonies the cultivation of the vine, the olive, the mulberry tree, and the plants producing hemp and flax. While Humboldt was in New Spain, an order came from Madrid to grub up all the stocks of vines in the northern part of the kingdom, where they had been cultivated with so much success as to give alarm to the merchants of Cadiz, by the diminished consumption of wine from the mother country. In 1811, there was but one olive plantation in New Spain, and that belonged to the Archbishop of Mexico. Parties of soldiers, at the same time, used to go about the country in search of tobacco-fields to destroy them as injurious to the King's monopoly.

tion of Chinese to the Isthmus, many of that people having already found their way to Panama.

The researches of the Botanist in this hitherto unexplored region would be sure of an ample reward, an entirely new field lying open, here, for the discovery of new species to add to the domain of his science.

ANIMALS.—The Peccary or Wild Hog, Cogue or Deer of the species known by the name of Wirribocerra in Mexico, Conejo, or Rabbit, Macho del Monte, a sort of Ass, Monkeys, Perezas or Sloths, Hormigueros or Anteaters, Iguanas, Wild Turkeys, Parrots, Macaws, Wild Ducks, Pigeons, etc. abound in the forest.

There is abundance of fish on both coasts of the Isthmus, known to the Indians by the names of the Berugati (fifty pounds' weight), Robalo, Bagre, Parvo, Hurel, Barbu, Corvina, Hurello, Mero, Cassou, Cominata, and Rayo, etc. All these are good eating, and easily caught.

Oysters are plentiful about the shores of the Gulf of San Miguel, and at the mouth of the Savana.

There are extensive beds of pearl oysters near the shores of the Island of San Miguel, or Isla del Rey, the largest of the Pearl islands, in the Bay of Panama, just outside the Gulf; and the natives of the villages on the island occupy themselves very profitably in diving for them.

Turtle are very plentiful on the Atlantic coast, and the Indians there carry on a trade in tortoiseshell.

MINERALS.—Among the minerals of Darien, it is not unlikely that coal may be found. Indeed, it was the opinion of Sir E. Parry, and Mr. Wheelwright, that the veins of coal in Chiriqui and Veraguas, bisected the whole isthmus.

COALS.—In July, 1851, I saw some specimens of coal at Lorica, on the river Sinu, which had been obtained near

Cienaga de Oro, higher up the river. The Sinu is the next river eastward of the Atrato.

On the banks of the Carare, a branch of the Magdalena, coal has also been found, and on my passage to Honda, last April, I met a gentleman who was proceeding to Velez, near the head of the Carare, to hire labourers to work in the coal mines. I have further been assured by Mr. Reid, late of Bogota, of the existence of coal on the banks of the Magdalena itself, near Conejo, a little below Honda.

Coal of excellent quality is obtained in the neighbourhood of the plain of Bogota, and between the village of Soachi and the great fall of Tequendama,²¹ twelve miles S.W. of Bogota, and is used in Mr. Wilson's ironworks, at Pacho, near the salt-mines of Zipaquirá. Between Facatativa and Villeta, also, on the road from Bogota to Honda, there is an extensive coal district, which will be of great importance in the future operations of the Magdalena Steam Navigation Company.

Thus there are coals both to the westward and eastward of Darien, and there is little doubt that Sir E. Parry and Mr. Wheelwright will be found to have been correct in their opinion.

The existence of coal in Veraguas, Chiriqui,²² and Costa

²¹ Perpendicular height, 504 feet.

²² Messrs. Whiting and Shuman, in their "Report," dated April 1, 1851, "on the Coal Formation of the Island of Muerto, near David, in Chiriqui," say—"We found the Muerto coal to burn equally as free as the other (the very best English coal), emitting a bright, beautiful flame, with as much bitumen." This coal contains upwards of 58 per cent. of solid carbon.

At the Island of Muerto, Messrs. Whiting and Shuman also found monuments and columns, covered with hieroglyphics, similar to those discovered in Yucatan by Mr. Stephens. At San Agustín, and in the forests of Laboyos and Timaná, about 2° north, near the sources of the Magdalena, there are columns,

Rica,²³ on the Magdalena and Sinu Rivers, in Vancouver's Island, the Aleoutian Archipelago, Amoy, and the Island of Formosa, on the Coast of China, is a great point in favour of steamers proceeding from the Isthmus to China, by grand circle sailing.

I believe that coals exist also in the Gallapagos Islands.

GOLD.—Of the auriferous character of the soil in many parts of Darien, I satisfied myself by tracing out some of the mines formerly worked by the Spaniards. During my late visit to Bogota, I learned, from returns existing in the archives there, that the King's five per cent. from one of these mines averaged annually 100,000 castellanos or 300,000 dollars.²⁴ It is not unlikely that the necessary cutting may

idols, altars, images of the sun, and other evidences of the former existence there of a great nation now extinct.

"Of the quantity of coal that can be obtained" in Chiriqui, "no doubt can be entertained that it is sufficient to supply the steamers on the Pacific for ages."—*Report of W. W. Ridley, Esq., C.E., New York.*

²³ "A recent discovery has been made at the village of Tarraba of a large bed of coal, upwards of six miles in length and 150 feet in breadth; as well as on the route in other localities."—Authorised "Costa Rica Report."

"The discovery of the mine of coal, respecting which you enquire, is certain. There is not only one, but many, and all of excellent quality, for I have seen specimens of them at the house of the President; some of them appeared to me very superior."—*Letter from Senor A. Ximenez, merchant of San Jose.*

²⁴ "Very rich mines," says Captain Fitzroy (p. 25), "were then (at the time of the Scottish colony—1698) worked in that district; but so harassed were the Spaniards by repeated incursions of the Buccaneers, by the Indians, and by the alarming attempt of the Scotch to colonise so close to the *real El Dorado* that early in the last century, the mines of Cana and others in the neighbourhood were concealed and abandoned. The miners and their strong guard of soldiers were withdrawn, and all the forts dismantled. No traces of Cana are visible. Santa Maria is likewise overgrown and hidden. Only a few straggling gold-washers now visit that neighbourhood occasionally."

The mines of Cana (the richest ever worked by the Spaniards)

develope the existence of rich veins of gold, and partly repay the expenses of the canal.

The rich gold mines on the banks of the Andagada and Bebara, branches of the Atrato, have lately been investigated by my friend, Mr. Vincent (now on his way to England), who, to reach them from Bogota, crossed the pass of Quindiu, 11,500 feet above the level of the sea, and traversed the valley of the Cauca, and the province of Antioquia; whilst Dr. Florentino Gonzales has lately purchased the titles of the Frontino, Juan Criollo, and Bolivia gold mines in Antioquia.

The geological formation of the country will probably be found to be, throughout, as it is in parts of the neighbourhood, micaceous schist overlying granite, in depth. Should such be the case, it is easy to understand why this district is free from earthquakes, and why it should be a gold-bearing region.²⁵

of which Captain Fitzroy makes mention, were those which I more particularly sought out in my explorations, and the localities of which I ascertained precisely.

²⁵ "El Panameño" of the 8th Dec. 1849, contains my report of the extensive gold diggings, which I ascertained to exist in the country between Panama and Pacora, about thirty miles to the eastward of it, and about twenty miles west of the Chepo. In the course of this journey I forded the rivers Matarnillo, Abajo (on the banks of which deer are plentiful) Lalaha, Mariprieta, San Bartolomé, and Juan Dias; and saw evidences in several places of the mining operations of the old Spaniards. The gold dust which I extracted was twenty-two carats fine. There was a settlement once established on the Pacora by Mr. McGregor, formerly British Consul at Panama, and Don Juan Ergote, an Andalusian, who used to cut Mora timber and export it from the river to Guayaquil and Callao. Near San Bartolomé is the "Cerro del Pilon del Oro," or Mountain of the Block of Gold, the highest hill in that district; whence, they say, a Spaniard from Lima once *extracted a block of gold*; it is believed that another may yet be found there.

"It is no longer a matter of doubt that gold can be procured

EMIGRATION AND COLONISATION CONSEQUENT ON
THIS UNDERTAKING. — So luxuriantly fertile is the

in the mines on the Isthmus, within a day's travel of Panama. Judge Shattuck, of Mississippi, a gentleman of high character and standing, and Dr. Cullen, a gentleman acquainted with the mining operations in California, have been prospecting, and give it as their opinion that the 'dust' exists in particles sufficiently large, and of a quality to justify extended operations. We have seen some of the dust procured by these gentlemen, and have no hesitation in asserting it to be the *real stuff*. Jewellers and dealers in the precious metals pronounce it fully equal to the productions of California. Large numbers of the Americans, impressed with the truth of the above statement, and the fortune which it promises in perspective, have determined not to go to California, but content themselves with the gains they can make here. May success crown their efforts and a golden treasure be their reward. The resources and destiny of Panama are not yet half developed or foreshadowed."—*Panama Star*, December 19, 1849.

"There is now in Panama a gentleman, a miner, just arrived from the interior—the diggings of Veraguas, who showed us a rich specimen of gold, 22 carats fine. He relates that his company, a party of forty Americans, are extracting from five to six dollars' worth of this gold per day. This gold, beautiful and of rich grain, is unlike the dust, but, on an average, will be found as large as a grain of rice. This fact proves that our miners of the Isthmus are not experienced with digging operations, because the value of the powder or dust, which they do not gather, is equal to half of their daily produce. The success in digging, so far, is promising; but when the explorations become more evident, we expect to hear of more profitable researches. One thing is self-evident—living is cheap on this part of the Isthmus, the climate is fine and healthy; and as it is near Panama, where they can easily ship or dispose of their earnings, we think five or six dollars here, with the low price of living, is fully equivalent to ten or fifteen dollars in California, where everything is high, and the country is sterile and unhealthy. Let the gold adventurers think of these things, and give the Isthmus a trial before they go further."—*The Panama Echo*, Feb. 8th, 1850.

The "*Panama Star*" of 14th December last, quoted in the "*Times*" of January 11th, gives the result of Major Doss's explorations in the vicinity of the river Chepo, and its principal branch, the Terable. Major Doss found gold in all the streams in that district, and each panful of earth yielded from 25 to 30 cents. One person, Mr. Sennett, washed out in one day five

whole country on this route, and so manifold are its agricultural advantages, that, totally irrespective of the project of a Canal, I would most strongly recommend it to the attention of the colonist, as presenting, from the valuable nature of its products, and the precocity of their growth, a more eligible locality for settling; and as affording a greater certainty of a speedy return for capital and labour, and a surer prospect of the attainment of affluence, than any other agricultural country.

Besides the great benefits which the opening of this canal

ounces. Major D. discovered the old mine of Sousou, formerly celebrated for its riches, in the ruins of which an immense deal of gold, which was ready for transportation, when it caved in since 1821, is said to lie buried. He brought to Panama some sugar-canes of very large dimensions; and speaks most highly of the vast returns that may safely be calculated upon from the cultivation of coffee, oranges, and cocoa-nuts, etc., on the banks of the Chepo or Ballano.

The backwardness of agriculture in Spanish America has been usually attributed to its mines of gold and silver. This error is successfully refuted by Humboldt. He admits that in some districts, as in Choco and other parts of New Granada, the people leave their fields uncultivated, while they mis-spend their time in searching for gold-dust in the beds of rivers. It is also true that in Cuba, Caracas, and Guatemala, where there are no mines, many highly cultivated tracts of country are to be found. But, on the other hand, the agriculture of Peru is not inferior to that of Cumana or Guiana; and in Mexico, the best cultivated district is the territory extending from Salamanca to Guanajuato and Leon, in the midst of the most productive mines of the world: so far from mining being prejudicial to agriculture, no sooner is a mine discovered and wrought, than cultivation is seen in its neighbourhood. Towns and villages are built. Provisions are wanted for the workmen, and subsistence for the cattle employed about the mine. Whatever the surrounding country can be made to produce, is raised from it in abundance—a flourishing agriculture is established, which not unfrequently survives the prosperity of the mines, to which it was indebted for its origin. The husbandman remains and cultivates his fields after the miner, who had at first set him to work, is gone to another district, in search of a more abundant or less exhausted vein.

will confer on passengers and merchants, it will lead to the colonisation of the very fertile lands adjacent. When these lands shall have been cultivated, and the canal shall be open, ships passing through so luxuriantly fruitful a country will be able to re-victual at a small expense, and thus have a much larger portion of their capacity available for the stowage of merchandise.

During the operations on the Canal, essential collateral benefits will be derived from the colonies about to be settled by two companies lately formed; viz., the Chiriqui Road Company, whose object is the making of a road across the western extremity of the Isthmus through the province of Chiriqui,²⁶ in New Granada, and the Costa Rica Company, who propose to make a road across the Isthmus, through the adjacent republic of Costa Rica; the colonisation of the fertile lands granted to those companies will ensure a constant and ample supply of fresh provisions to the labourers employed on the Canal.

Another of the immediate results of the opening of a road

²⁶ "Look at these immense plains, covered only by grazing cattle, with little or no cultivation, though from the oak region of the Cordilleras down to the mangroves on the sea-side, the industrious farmer could select just exactly the soil and temperature he requires. One who has seen the Old World, with its overburthened population—a population of industrious moral families, who ask no other favour from God and their fellow-men than permission to 'earn their bread by the sweat of their brow'—would feel, I say, that it is a pity so much fine land, and so accessible, should be barren, for want of hands to accept the bounty so freely offered. How many cold, shivering beings could become happy here, where only wander undomesticated cattle, that produce neither milk nor cheese! Here it would puzzle a healthy man to die of hunger. The corn and plantain-tree feed the poor native, almost without any care on his part; and if his thatched hut does not leak, he merrily bids 'dull care begone.'"
—*Report of Dr. Robert Mac Dowall, residing at David, Province of Chiriqui.*

and canal will be the colonisation of the elevated tablelands of the interior provinces of New Granada. These plateaux or elevated valleys, between the ridges of the Andes, present a healthy climate and a virgin soil, unencumbered with forest, on which, at certain elevations, the productions both of the tropics and of temperate climates would flourish in juxtaposition. Here there is no winter, but a perpetual spring reigns, and the farmer may reap two, three, or even four crops a year, wheat arriving at maturity in seventy and potatoes in eighty days. This country, therefore, offers to the emigrant greater advantages and to the capitalist a richer field for investment than any other district in the world.

At the elevation of 1788 feet, mean temperature 76°, wheat, as I have before said, is reaped in 70 days from the sowing, and yields three or four times as much as in northern countries; at 3576 feet, mean temperature 70°, it is reaped in 100 days; and at 4950 feet, mean temperature 65°, in four months: its cultivation ceases at the height of 9,675 feet, and it absolutely ceases to produce at the elevation of 10,727 feet, mean temperature 48°. In the provinces of Merida and Truxillo, in Venezuela, excellent barley grows at the height of 9,351 feet, mean temperature 57°. At 3,300 feet elevation, potatoes are excellent, and are dug in four and a half months. The produce of the potato is twice that of the vegetable in any part of Europe. Some of the fruits of the hot valleys will grow at considerable degrees of elevation, as the Plantain (*Musa Paradisiaca*), the staple food of the tropics, which will grow even as high as 5,502 feet, mean temperature 66°; and one species, the Cambure (*Musa Sapientium*), produces fruit at the height of 7,701 feet, mean temperature

61°. The Yucca or Cassava (*Iatropa Manihot*) will also grow at 7,701 feet height. From the immense productiveness of the Plantain, a small spot of land cultivated suffices to supply the wants of several families. The city of Bogota, the capital of the republic of New Granada, is situated on a plain 8,600 feet above the level of the sea, mean temperature 57°, and has a population of about 40,000.

THE HISTORY OF DARIEN AND THE ATTEMPTS TO CROSS IT.—A rapid sketch of the history of Darien may account for the ignorance that has hitherto prevailed regarding this magnificent country.

The first settlement effected in Darien was Santa Maria de el Antigua, at the mouth of the Atrato; founded in 1509 by the licentiate Enciso, by the advice of Vasco Nuñez de Balbao, who had escaped from Santo Domingo, and embarked on board Enciso's vessel, concealed in an empty wine pipe. On 26th September, 1513, Vasco Nuñez discovered the Pacific Ocean, at the Gulf of San Miguel, which he named so from having discovered it on St. Michael's day, and was afterwards beheaded by Pedro Arias Davila, who was sent from Spain to supersede him.

The next settlement was Acla or Agla, at the mouth of the Aglaseniqua or Caledonia River, founded by Gabriel de Rojas in 1514, and fortified in 1516, by Davila.

In 1532, Agla and the whole of Darien were abandoned for Nombre de Dios and Panama, which was settled by Davila, after the conquest of Tubanama, its cacique, by Vasco Nuñez.

Although Vasco Nuñez conquered the cacique of Carreto,

²⁷ From this city the magnificent snow-capped summit of Tolima, upwards of 18,000 feet high, is plainly visible.

(whose daughter he married), Comagre, Ponca, Quarequa, Chiapes, Zumaco and Pocorosa, in his expeditions across the Isthmus, yet the Spaniards did not effect permanent settlements in Darien until a century later.

In 1680, the buccaneers crossed the Isthmus by the Chuquanaqua, and took the town of Real de Santa Maria on the Tuyra.

The following is the account in Basil Ringrose's MS. in the Ayscough Collection (British Museum):—"On the 5th of April, 1680, 331 buccaneers, most of them English, passed over from Golden Island and landed in Darien, each man provided with four cakes of bread, called dough-boys, with a fusil, a pistol, and a hanger. They began their journey, marshalled in divisions, with distinguishing flags, under their several commanders, Bartholomew Sharp and his men taking the lead. Many Darien Indians kept them company, as their confederates, and supplied them with plantains, fruit, and venison, for which payment was made in axes, hatchets, knives, needles, beads, and trinkets, all of which the buccaneers had taken care to come well provided with. Among the Darien Indians in company were two chiefs, who went by the names of Captain Andreas and Captain Antonio. The commencement of their march was through the skirt of a wood, which having passed, they proceeded about a league by the side of a bay, and afterwards about two leagues directly up a woody valley, where was an Indian house and plantation by the side of a river. Here they took up their lodgings for the night, those who could not be received in the house building huts. The Indians were earnest in cautioning them not to sleep on the grass, on account of adders. This first day's journey discouraged four of the buccaneers, and they returned to the ships.

Stones were found in the river, which, on being broken, shone with sparks of gold. These stones, they were told, were driven down from the neighbouring mountains by torrents during the rainy season. The next morning, at sunrise, they proceeded on their journey, labouring up a steep hill, which they surmounted about three in the afternoon, and at the foot on the other side they rested on the bank of a river, which Captain Andreas told them ran into the South Sea, and was the same by which the town of Santa Maria was situated." This was the Chuquanaqua which they reached by crossing the steep hill, called Loma Deseada, behind Carreto Bay (see p. 54), a hill considerably higher than that behind Caledonia Bay and Port Escoscés. It will be seen, by reference to the map, that the buccaneers took a course eastward of the route to the Savana, and got upon higher ground.

In 1681, Surgeon Lionel Wafer, who was one of the original party of the Buccaneers, that crossed the Isthmus from Caledonia Bay, by the Chuquanaqua into the Gulf of San Miguel, having scorched his knee by the accidental explosion of some gunpowder, and being left behind, on his return back, again crossed the Isthmus from the mouth of the Congo, in the Gulf of San Miguel, to the mouth of Concepcion river, near San Blas Bay.

In 1685, the gold mines of Darien were closed by Royal Decree (see p. 58.)

The following is the translation of the decree:—

"Year 1685. Royal decree. March 12th.—That the President of Panama break up and destroy the mines of gold that exist in the vicinity of the rivers of the province of Darien, *because the coveting of them has induced the pirates to undertake the transit from the sea of the north to the sea*

of the south by those rivers, to the prejudice of the public cause—and that the Viceroy of Peru co-operate in it" (vid. t. iii. n.7 of the Archives of the viceroyalty of Peru, at Lima).

DECREES AGAINST BUCCANEERS.—There are most stringent Decrees in the above Archives against Buccaneers on this Isthmus, dated 27th September, 1663; 31st December, 1672; 31st July, 1683; 26th September, 1686; and 14th November, 1690.

In 1698, the Scotch colony settled on the promontory outside of Port Escoscés, and was starved out in 1699, by the infamous orders of William III., actuated by jealousy, and influenced by Spanish and Dutch intrigues. The project of colonization was started by Paterson, the founder of the Bank of England, from information given him by Surgeon Lionel Wafer.

In 1719, the Indians rose against the Spaniards, and the few *doctrinas*, or missions that had been established were broken up. I find in Don Antonio de Ulloa and Don Juan Jorge, the Spanish Academicians' "*Viaje*," that previous to this date there were *doctrinas* in Matumaganti and Aglaseniqua.

In 1740, peace was made with the Indians by Lieut.-Gen. Don Dionisio Martinez de la Vega: and Don Sebastian de Eslaba, viceroy of Santa Fé, sent to North Darien two Jesuits, Fathers Salvador Grande, and Pedro Fabro; and the President of Panama sent to the south, Fathers Matias Alvarez, and Claudio Escobar, who formed the settlements of Molineca, Balsas, Tucuti, Chuquanaqua, Cupe, and Yavisa; but had scarcely succeeded in forming these missions, when the Indians deserted them, and the fathers with difficulty escaped with their lives.

In 1784, a junta was convened in Bogota by the viceroy and archbishop, Don Antonio Caballero y Gongora, when instructions were issued to establish forts at Mandinga, Concepcion, Carolina (in Caledonia Bay), and Cayman. The command was entrusted to De la Torre, and with him were associated Brigadier General Don Antonio de Arebalo, and Garcia de Villalba; these forts were established in 1785, and the same year Lieut.-Colonel Don Andres de Arisa, governor of Darien, founded Fuerte del Principe with 200 men.

DON ARISA'S PROJECTED ROAD.—Arisa projected a road from Principe to the mouth of the Sucubti, on the east bank of the Chuquanaqua, and thence to Carolina. He procured with much difficulty the consent of the Indians to the opening of the road, through the aid of Captain Suspani, or Urruchurchu, the chief of Sucubti. Carrera was sent with 300 men of the Princesa regiment (white soldiers), to open the road, but went to Panama, leaving the work unfinished; and it appears that the road never was actually made. *The only person who ever crossed the Isthmus from Carolina to Principe was adjutant Milla;*²⁸ *but only once*, as, subsequent to his crossing, he had to go to Panama and Portobello, to get a passage to Carolina.

The route proposed by Arisa, from information given him by Suspani, and the same by which Suspani guided Milla, was, to ascend the Aglatomate or Aglaseniqua, one hour; then to ascend the ravine of the Cordilleras, to the head-waters of the Sucubti, an eight hours' journey; then to go down the Chuquanaqua, half a day by water, or one day by land, and turning to the right for six hours, over

²⁸ See his Diary in the Appendix.

ground quite level, to reach Principe. The Spaniards endeavoured to found Miraflores at the mouth of the Sucubti, where Suspani resided; and on the plain between the Chuquanaqua and the Savana, they proposed to found Betanzas as a central station.

Matos, governor of Darien in Arisa's absence, and the engineer Donoso, were the only persons who held a second opinion on the subject. They recommended descending the Chuquanaqua to Yavisa, and then crossing to Principe, evidently a much longer route than that of Arisa.

None of them had any idea of a direct route from Fuerte del Principe to Carolina, and any further progress in the knowledge of the country was stopped by the withdrawal of all the establishments in 1790, in consequence of the treaty of peace (see p. 63); since when, the Isthmus of Darien has sunk into such utter oblivion, that previous to my first visit to it in 1849, though I made very extensive enquiries in Panama, I could not find a single person who had the slightest knowledge of it, except the governor, Don José de Obaldia,²⁹ now Vice-President of the Republic, who strongly recommended me to make explorations in that isthmus, and was fully of my opinion that somewhere there I should find a canal route.

The old people in Darien have a perfect recollection of the attempts made by Arisa, Donoso, and Matos to open a road to the Atlantic; and one of them, Eulalio Arva, of Chapigana, now dead, informed me that he accompanied his father, who was a *barqueano*, or boatman of Donoso's, when he and five engineers from Spain surveyed the Chuquanaqua, and afterwards ascended the Savana as far as Principe, the Indians having prevented their further pro-

²⁹ Who, however, never was in Darien.

gress. He also saw Suspani when he came to Yavisa, to make peace with the Spaniards and be baptised, and further stated that the people at Principe could hear the gun fired at Carolina.

Mr. Vincent, a gentleman of great talents, who has co-operated with me for two years in the promotion of this project, and accompanied me to Bogota, remained there after I left, copying documents, relative to the history of Darien, existing in the archives of that city, and collected a vast amount of interesting information, which he will no doubt publish on his return.

GENERAL DESCRIPTION OF THE ISTHMUS — ITS COASTS AND RIVERS.—It will be necessary here to give a short description of the Isthmus of Darien, generally, in order to convey some idea of a country of which so very little is known.

The Isthmus of Darien, according to old Spanish maps, is separated from that of Panama by a line drawn from Cape San Blas to the mouth of Chepo river, in the Bay of Panama, and may be regarded as divided from the province of Choco, by a line drawn from the mouth of Suriguilla river, which falls into the Culata del Golfo, or bottom of the Gulf of Darien, to the mouth of the Rio Jurador, or Rio de Hambre, which falls into the Port of Pines, forty miles S.S.E. of Garachiné. In the time of the old Spaniards, it formed a province, and was a distinct territory of the Republic of New Granada, until June 22, 1850, when it was reduced to be a canton of the province of Panama, in that Republic.

COAST OF DARIEN ON THE PACIFIC.—Between Chepo, or Ballano river, and the Gulf of San Miguel, the rivers Chiman, Hondo, Corotu, Peñado, Gonzalo

Vasquez, etc., etc., open into the Bay of Panama. Into the Gulf, the rivers Congo, Buenavista, Cupunati, Tuyra, and Savana open on the north and east, and on the south the Moguey, Guaca, Taimita and Sambù. On this last river there is a *hacienda* belonging to Sr. Bermudez, of Panama. Gold is said to exist at its sources. At Taimita, resides a white man from Venezuela, named Fernando Melo.

With the exception of these, the only settlements on the whole Pacific-coast of Darien, are the villages of Chimán, and Garachiné, and a few huts at the mouths of Congo and Taimita rivers, Chepo being in the Isthmus of Panama. These are inhabited by Granadians, and no Indians appear on the coast.

The coast and inland country from Garachiné to the Port of Pines is completely *terra incognita*, and would well deserve exploring. I once met an Indian from the Jurador, in a canoe, but could extract no information from him, as he appeared to be very unsociable and uncommunicative.

RIVERS OF DARIEN FALLING INTO THE PACIFIC.—The Tuyra, Santa Maria, or Rio Grande del Darien, is the largest of the rivers of Darien; the Atrato, above its mouths, being included in the province of Choco.

THE TUYRA traverses the greater part of the space between the Atrato and the Gulf of San Miguel, from S.E. to N.W. Its head-waters are separated from the Atrato by the Sierra de Maly, and Cerro del Espíritu Santo, a continuation of the Cordillera of Choco.

UP THE TUYRA TO SETEGANTI.—From its mouths, Boca Chica and Boca Grande, to the abandoned settlement of Seteganti, seven miles, the river has an average width of three miles. The scenery in this part of the

Tuyra is magnificent, especially about the mouth of the Savana; the only settlements on this portion of the river, consist of a few huts at *La Palma*, on the south bank, opposite the Savana mouth, where lives a Choco man, named Marcado, who accompanied Capt. Cochrane, when he crossed from Cupicà to the Napipi, and two families on Boca Chica Island.

CHAPIGANA.—Two miles above Seteganti is Chapigana, where there are about two hundred inhabitants, and a Corregidor; two Scotchmen, Messrs. Hossack and Nelson reside here, and are engaged in wood-cutting and boat-building.

A Portuguese, named Jose Maria Troncoso, commonly called Don Pepe, also resides here; from having sailed many years in slave-ships, from St. Paul de Loando, on the coast of Africa, to the Brazils, he is an excellent sailor. At this place, and also at Boca Chica Island, Real de Santa Maria, and Yavisa, there are ruins of old Spanish Forts. The town is built in the only swamp I have seen in Darien, and is consequently unhealthy.

RIVER LA MAREA AND GOLD MINES.—Six miles higher up is the mouth of La Marea, at the sources of which the Spaniards formerly worked gold mines, which Dr. Le Breton is about to re-open on the part of a company in Paris.

RIVER BALSAS AND GOLD WASHINGS.—Two miles higher up, on the same or south bank, the Rio Balsas opens. On this river, are the villages of Tucuti and Camoganti, near which are some gold washings.

THE CHUQUANAQUA.—Thirteen miles above Rio Balsas, or thirty miles above Boca Chica, the Chuquanaqua falls into the Tuyra from the north.

UP THE CHUQUANAQUA.—At the junction of the Rio Chico with it, about twelve miles above its mouth, is the town of Yavisa, the capital of Darien, with a population of about 200; here the Jefe Politico, Don Manuel Borbua, resides, and there is an old Spanish fort in good order, which formerly had a garrison of 200 men. There are some cattle in the plain, which is cleared to some distance from the town, and extends to the foot of a range of hills. In this town reside two men named Mascareño and Pedro Louriano Garvez, who were born at Fuerte del Principe, and left it when it was abandoned in 1790;³⁰ they state that upon its abandonment the garrison of Principe, consisting of 150 men, was sent to Yavisa, and that there used to be occasionally as many as 400 soldiers at Principe.

RISE OF THE CHUQUANAQUA.—The Chuquanaqua rises very near the Atlantic coast, from Loma Deseada, the ridge of hills behind Carreto,³¹ and has a very tor-

³⁰ See Report of its abandonment in Appendix.

³¹ "In a letter from a person of eminence and worth in Caledonia to a friend at Boston, in New England" (written by Paterson), "Certainly the work began here is the most ripened, digested, and best founded as to privileges, place, time, and other like advantages, that was ever yet begun in any part of the trading world. We arrived upon this coast the first, and took possession the 30th of November, 1698; our situation is about two leagues to the southward of Golden Island (by the Spanish called Guarda) in one of the best and most defensible harbours perhaps of the world. The country is beautiful to a wonder; insomuch that all our sick, which were many when we arrived, are now generally cured. The country is exceedingly fertile and the weather temperate. The country where we are settled, is dry and rainy, grand hills but not high; and on the sides and quite to the tops, three, four, or five feet good fat mould; not a rock or stone to be seen. *We have but eight or nine leagues to a river*" (the Chuquanaqua) "where boats may go into the South Sea. As to the innate riches of the country, upon the first

tuous course. There are a few settlements of Indians on the upper branches of this river; but from the very small numbers who visit Yavisa or Carreto, I conclude that their population must be very scanty. They do not allow the Yavisa people to go any higher up the river than the town of Yavisa; and Don Antonio Baraya, Prefect of the Territory of Darien in 1849, and now Governor of the Province of Azuero, in vain used every persuasion with some of them who came down to Yavisa, to induce them to allow me permission to go up the river.

This gentleman kindly endeavoured to assist me in my explorations; but notwithstanding the following letter, I could not induce a single man to accompany me, and had to proceed alone:—

[Translation].

THE SEÑOR COREGIDOR OF MOLINECA.

Yavisa, 9th of January, 1850.

DEAR SIR,

Dr. Edward Cullen proceeds to your town with the object of continuing his explorations; I hope that you will be kind enough to procure him the men that he requires for the continuance of his journey, who will be paid for their services by Dr. Cullen. I hope that you have no news, and remain

Your most attentive Servant,

ANTONIO BARAYA.

TRIBUTARIES OF THE CHUQUANAQUA.—In its course from Loma Deseada, the Chuquanaqua is joined by the Chieti, Moreti, Artuganti, Sucubti, the united streams of

information, I always believed it to be very great; but now find it goes beyond all that ever I thought or conceived in that matter."

the Jubuganti and Chueti,²⁸ Meti, Ucurganti, Tuquessa, Tichibucua, Tupisa and Yavisa. Of these the Yavisa is the largest, and at its head is Ponca, the residence, in the time of Vasco Nuñez, of a powerful Cacique, who gave him battle, and opposed his march across the Isthmus. It was to the mouth of the Sucubti that the Indians guided the Buccaneers to the Chuquanaqua; and the Pass of Jubuganti is mentioned by Paterson in a passage quoted in the History of the Scotch Colony of Darien in the Appendix.

THE PIRRE.—A little above the Chuquanaqua the Pirre opens, on the south bank of the Tuyra, having a very short course from Cerro Pirre, one of the highest hills in the east of Darien.

SANTA MARIA.—Just above the mouth of the Pirre is Real de Santa Maria, where are the ruins of a fort. To this village thirty of the men who took Portobello, in 1819, under General Gregor M'Gregor (the same, I believe, who was called the Cacique of Poyais, and issued the Poyais bonds), and who were afterwards made prisoners by Santa Cruz and Alessandro Lores, were sent for confinement. Three of them were killed at this place, and Colonel

²² Paterson says, in his "Second Proposals"—"In our passage from land, from Caledonian harbour, we have six leagues of very good way to a place called Swetee; from Swetee to Tubugantee we have between two and three leagues not so passable, by reason of the turnings and windings of the river, which must often be passed and repassed. But a little industry would make this part of the way as passable as any of the rest. At Tubugantee," which is one of the upper branches of the Chuquanaqua, "there is ten feet of high water, and so not less in the river till its fall in the Gulf of Ballona" [the Gulf of San Miguel], "which enters the south. This Gulf of Ballona receives several great rivers, and hath excellent harbours and roads for shipping. This we commonly call the Pass of Tubugantee."

Rafter and another at Yavisa. I got this account from an old Indian woman who was present when they were killed. Below the Pirre is the site of the old town, which was taken by the Buccaneers in their expedition in 1680. They found only 3 cwt. of gold here, the rest having been previously carried away by the Spaniards. The population of Santa Maria is about 150.

MOLINECA.—Five miles above Santa Maria is Molineca, with about 100 inhabitants. From the other side of the river there is a path to the Chuquanaqua, opposite Yavisa; the tide reaches to Molineca.

PINOGENA.—Five miles above Molineca is Pinogana, the last settlement in the Tuyra, with about 150 civilised Indians and Sambos. The population of the other villages is almost entirely composed of negroes, who have no intercourse with the Indians of the rivers on the north, and would be killed if they attempted to ascend any of them towards the Atlantic. The whole Granadian population of Darien scarcely amounts to 1000 souls.²⁹

THE PUCRO AND PAYA.—Of Pucro and Paya nothing

²⁹ Colonel Lloyd gives the following return of the population of the Granadian settlements of the canton of Darien in 1822 :—

| | | | | | | |
|---------------------|---|---|---|---|---|-----|
| Yavisa, the capital | . | . | . | . | . | 341 |
| Santa Maria | . | . | . | . | . | 245 |
| Fichichi | . | . | . | . | . | 100 |
| Pinogana | . | . | . | . | . | 146 |
| Molineca | . | . | . | . | . | 85 |
| Tucuti | . | , | . | . | . | 113 |
| Cana | . | . | . | . | . | 30 |
| Chapigana | . | . | . | . | , | 162 |

1,172

Of the above, Cana and Fichichi have been many years abandoned; and the population of the other settlements has not increased, owing to the fact of high wages at Panama having induced many to leave Darien for that city.

is known. I was defeated in my attempt to ascend the latter, though I have since had reason to believe that the fear of the small-pox being introduced rather than hostility to foreigners was the cause of my having been driven back, therefore I shall try again to ascend it, bringing some vaccine lymph with me, as I have found that prophylactic to have availed me in many hazardous explorations in the British, Spanish, and Portuguese Guianas, and many other savage countries, and I take this occasion to digress, and recommend all explorers never to travel without it. It is a much more powerful protection than a revolver or a bowie-knife.

THE MOUNTAIN CHACARGUN AND GOLD DUST.—Two Paya Indians told me that from the Paya to a mountain called Chacargun was one day's journey; that it took one day to cross it, one day from the other side to Arquia, and one day thence to the Atrato. They stated, also, that there was a "quebraila," or little rivulet, in Chacargun, called Tiyaco, which contained abundance of very fine gold, which they called *aasites*.

GOLD MINES ON THE UPPER TUYRA—WHY SHUT UP.—On Cana and some other branches of the upper course of the Tuyra, the old Spaniards carried on gold mining very successfully; but the mines were closed by order of the King of Spain, in consequence of their having attracted the Buccaneers (see p. 47).

THE ATLANTIC COAST OF DARIEN.—The Atlantic coast of the Isthmus of Darien³⁰ extends from the mouth of Suriguilla river in the bottom of the Gulf of Darien, in lat. 7° 55' 15" and long. 76° 56', to Cape San Blas in lat. 9° 34' 36" and long. 79° 1' 90".

³⁰ For a description of the various harbours and anchorages on this coast, see the "Columbian Navigator."

THE GULF OF DARIEN.—The Gulf of Uraba, or Darien, offers safe anchorage in all seasons.

RIVERS FALLING INTO IT.—THE ATRATO.—The delta through which the Atrato discharges itself on the S.W. side of the Gulf is inundated even at low water, and covered with an impenetrable forest of mangroves: it is consequently very unhealthy. Though the Atrato has great depth of water inside, yet there is a bar with only five feet of water on it at the most practicable of its mouths, and the rise of tide throughout the Gulf is only two feet.

TRAFFIC OF THE ATRATO AND GOLD DUST.—There is a very considerable trade carried on by this river between Quibdo or Citera, Novita and Cartago, on the Atrato and Cauca rivers, and the town of Lorica,³¹ on the Sinu and the city of Carthagena. It traverses the whole province of Choco, which, in 1841, imported 10,000 bales from Great Britain, and whence there is a large export of gold-dust.

STEAM NAVIGATION ON THE ATRATO.—Within the last few months, a substantial Company has been formed for the purpose of navigating the Magdalena³² and Atrato rivers by steamers; and many of the wants of the excavators and

³⁵ At this place a trade is carried on with Americans in fustic and caoutchouc.

³⁶ The River Magdalena, the main artery of New Granada, 1,050 miles in length, arises from Lake Buey, north of the Paramo, or elevated mountain top of Las Papas, in 1° 58' N. lat., transverses the forests of Laboyos and Timaná, the spacious plains of Neiva, and the forests of Nare, and uniting with the Cauca in lat. 9° 25', enters the Atlantic 600 miles N. of its source, which has an elevation of about 5,900 feet, whilst that of the Cauca, in the snows of Coconuco, is 15,000 feet above the level of the sea. It is navigable for large boats from its mouth to Honda, where there is a small fall called El Salto, and from thence up to Neiva for smaller boats.

On my passages up and down this river last year, on my way from Carthagena to Bogota and back, I made the following estimate of the distances from Calamar (25 leagues, or 75 miles

first settlers on the Canal route will be supplied through the medium of that Company's steam-boats.

from Carthagena by road), to Honda (75 miles from Bogota, by road) :—

| | Miles. | | Miles. |
|----------------------------|--------|---------------------------|--------|
| Calamar to Santa Cruz . . | 54 | Brought forward . . . | 329 |
| Santa Cruz to Pinto, above | | Brojorque to Zorilla . . | 9 |
| the Cauca Mouth . . . | 36 | Zorilla to Shed between | |
| Pinto to Pueblo Nuevo . . | 15 | Opon & Chucuri mouths | 21 |
| Pueblo Nuevo to Mompox . | 15 | Thence to Carare . . . | 36 |
| Mompox to Banco . . . | 48 | Carare to San Bartolomé. | 36 |
| Banco to San Pedro . . . | 27 | San Bartolomé to Garra- | |
| San Pedro to Regidor . . | 6 | patas | 24 |
| Regidor to Shed at Puerto | | Garrapatas to Nare . . | 30 |
| de Ocaña | 21 | Nare to River La Miel . | 50 |
| Puerto to Ocaña to Badillo | 30 | La Miel to Buena Vista . | 7 |
| Badillo to Baranquilla . . | 15 | Buena Vista to Guarumo . | 21 |
| Baranquilla to Rosario . . | 13 | Guarumo to Egipciaca . . | 15 |
| Rosario to Paturia . . . | 7 | Egipciaca to La Vuelta or | |
| Paturia to San Pablo . . . | 15 | Conejo | 21 |
| San Pablo to Brojorque . . | 27 | Conejo to Honda . . . | 12 |
| | <hr/> | | <hr/> |
| | 329 | | 611 |

Thus the distance from Carthagena to Calamar is . . 75 miles

Calamar to Honda 611

Honda to Bogotá 75

Carthagena to Bogotá 761

The following is a statement of the Population of those provinces of New Granada, which communicate with the Magdalena, extracted from an official census published by the government of New Granada last year.

| POPULATION. | POPULATION. |
|------------------------------|------------------------------|
| Province to Antioquia 75,053 | Brought forward . 907,626 |
| Bogotá . . 142,557 | Province of Sabanilla 35,357 |
| Carthagena . 116,593 | Santamarta . 36,485 |
| Cipaquirá . 73,032 | Santander . 21,282 |
| Córdova . . 90,841 | Socorro . . 157,085 |
| Cundinamarca 91,326 | Tequendama . 52,947 |
| Mariquita . . 84,070 | Tundama . . 152,753 |
| Medellin . . 77,494 | Tunja . . . 141,483 |
| Mompox . . 30,207 | Valle-Dupar : 14,032 |
| Neiva . . . 103,003 | Vélez . . . 109,421 |
| Ocaña . . . 23,450 | |
| | <hr/> |
| Carried forward . 907,626 | Total . 1,628,471 |

Into the Culata, or bottom of the Gulf, the Suriquilla falls, forming the boundary between Darien and the Province of Carthagena; just above the most western of the mouths of the Atrato the river Tarena disembogues: I believe that Arquia, of which I have heard the Indians speak much, and which is one of the largest settlements, is on this river; they told me that one man at Tarena mouth, I believe Zapata's son, mentioned elsewhere, speaks a little English. There are also settlements at Tutumate, Tripo Gandi, and Gandi mouths; but the interior is utterly unknown, and presents a most inviting field for future explorers, as I fear my time will not permit me to penetrate in that direction.

CAPE TIBURON.—Proceeding along the west side of the Gulf to Cape Tiburon, three peaks are visible — Pico Tarena, Pico Gandi, and Pico Tiburon. Cape Tiburon has two small harbours; the larger, Miel Harbour, has good holding-ground, and its greatest depth is thirteen fathoms, with a sand and clay bottom.

From Cape Tiburon a chain of hills, crossed by valleys and ravines, follows the curved direction of the coast, parallel and close to it.

BAY OF ANACHUCUNA.—West of Cape Tiburon, the Bay of Anachucuna, two and a half miles deep, has a beachy shore extending nine miles from E. to W., nearly to the Point of Carreto.

CARRETO BAY.—Inside the Peak and Point of Carreto thirteen miles W.N.W. (N. 62° W.) of Cape Tiburon, is the Harbour of Carreto, of a semicircular form, which falls in about a mile, and is a mile across in its narrowest part, with a depth of from three and a quarter to eight fathoms; but is open to the N.E., on which account it is of little use in the season of the bre^{ac}700

PUNTA ESCOSCÉS. — At seven miles N.W. $\frac{3}{4}$ W., (N. 48° W.) from the Point and Peak of Carreto, is Punta Escoscés, the S.E. point of Caledonia Bay, which I have already described.

One of the Scotch colonists of Darien (1698-99), speaking of the harbour of New Edinburgh, or Port Escoscés, says—"We have already had Dutch, French and English, all at the same time, in our harbour, and all of them wondering what the rest of the world have been thinking about, while we came here to the best harbour in the best part of America. The soil is rich, the climate temperate, and the water sweet."

NEW EDINBURGH—THE SCOTCH COLONY OF DARIEN.
—The Scotch colony erected their town of New Edinburgh on the promontory³³ outside of Port Escoscés; the settle-

³⁷ "As soon as they were arrived safe in the bay, after their hearty thanks to Almighty God for their safe arrival, they fell to sounding the coasts, and found within a great chain of islands (among which is the Golden Island, by the Spaniards called St. Katherine), a most large and capacious port, where ships of the greatest burthen may safely ride secure from wind and weather. The entrance of the port, to which they have given the name of the Port of New St. Andrew, is not above cannon-shot over, so that it is very capable of being defended against the attacks of any enemies, they having already raised platforms for that end. Upon the low neck of a promontory (see the map with this pamphlet), and which contains not above *thirty acres* of land, they have began to build them such houses as so short a time can give them leave, which they have covered over with the leaves of the tree called Plantain, whose leaves are about a foot and a half long. For the better security of the new fort, they have cut the isthmus or neck of land on which it stands, for about 130 paces, and let in the sea, so that it has no communication with the land but by a bridge. In this fort they have already mounted fifty guns, and placed in it a garrison of near 600 men."—"History of Caledonia, or the Scots' Colony in Darien, by a gentleman, lately arrived. London, 1699."

"The locality," says Captain Fitzroy (p. 25) "was so much liked by the Scotch adventurers, that even after their utter ruin

ment of Agla, founded in 1514 by Gabriel de Rojas, was situated on the west bank of the mouth of the Aglaseniqua.

FORT CAROLINA.—The same place was afterwards selected by General Arebalo for the fort of San Fernando de Carolina,³⁸ established in 1785, and abandoned in 1790. A grove of cocoa-nut trees and some bricks and tiles indicate its site.

ASCENSION ISLAND AND INDIAN TREATY.—On the island of Ascension, to the south of Golden Island, I found a large space covered with a mass of tiles and bricks. On this island, a treaty for the reduction and pacification of the Indians was celebrated between the Spaniards and Indians on the 9th of June, 1787 (see p. 50). It was signed by General Antonio de Arebalo and Joseph de

and dispersion, the leaders (in particular Paterson) wished and endeavoured to organise another expedition to the same place. In those days much gold was obtained near St. Miguel Gulf. The climate of the higher ground was pleasant, and the soil remarkably fertile. General commerce with the Indies and Europe, slave-trade with the Spanish colonies (?) and obtaining gold from the neighbouring mines, were no doubt chief inducements to the Scotch colonists, *besides opening a way through the Isthmus, which there is so narrow.*"

"As we grow stronger we shall endeavour to procure a port in the South Sea, from whence it is not above six weeks' sail to Japan, and some parts of China; so that, bating distress of weather, by bringing the commodities of these countries over this narrow Isthmus, the riches of these kingdoms may in three or four months' time arrive in Europe."—*History of Caledonia, or the Scots' Colony in Darien*, p. 53.

The Scotch colony was only broken up at last by the desertion and discountenance of the English sovereign, and his command that no supplies should be sent to them from the neighbouring English colonies; and they ultimately, after three successive attempts, were compelled to surrender, after a gallant defence, to a greatly superior force of Spaniards.

³⁸ See Diary of Transactions at this Fort, in Appendix.

Guerra y Vaos on the part of the Spaniards, and on the part of the Indians by

the Cacique General Don Bernardo of Etata

Captain William Hall - - Putrigandi

Captain Guaicali - - Rio Mono

Captain Gorge - - Agaⁿ

Captain Urruchurchu - - Sucubti

Captain Jack - - Gandi

and Captain Hooper.

The witnesses to the signatures of the Cacique General and Captains are Antonio Espitalete, Geronimo de Segovia, Manuel de Echandia, De Piu Duvernay, and Eusebio de Escalante.

I believe that Captains Hooper and Hall were Englishmen, who used their influence with the Indians to induce them to enter into this treaty, of which and of many other documents existing in the Archives of Bogota I have copies, which I owe to the kind permission of Don Patrocinio Cuellar, the Secretary of State for the Department of Internal Affairs; they are certified John by Oscar Levy, keeper of the Archives.

CALEDONIA BAY.—It was from Caledonia Bay that the buccaneers, under Bartholomew Sharp, Basil Ringrose, Dampier, etc., with whom was Surgeon Lionel Wafer, crossed over to the Chuquanaqua on their way to the Pacific.

THE SAMBALLAS.—From the Isle of Pines to San Blas Point, the islands, kays, shoals and reefs of the Great Archipelago of the Mulatas or Samballas, extending in a N.W. direction, form, between themselves and the mainland, a series of anchorages and sheltered channels, secure in all weathers. The channels formed in this space are Pinos, Mosquitos, Cuiti, Zambogandi, Punta Brava,

Cocos, Rio Monos, Ratones, Playon Grande, Puyadas, Arebalo, Mangles, Moron, Caobos, Holandes, Chichimé, and San Blas. A chain of mountains follows the direction of the coast, at a few miles' distance.

SAN BLAS POINT.—San Blas Point forms the N.E. boundary of the Gulf of San Blas, the mouth of which extends north and south six miles to the anchorage of Mandinga; and from this line, the gulf has an extent of six miles to the west. Its shores are low, and bordered by Mangroves.

THE INDIANS OF DARIEN AND THEIR FEELINGS TOWARDS THE BRITISH.—The Atlantic Coast of Darien is inhabited by the Tule or San Blas³⁹ Indians, a fine handsome, athletic race, though of low stature, with the copper-coloured complexion, straight coarse black hair, and other characteristics of the whole Indian race, differing, in no respect, from the Indians of Guiana, Venezuela, or any other part of South America. They live very peaceably together, are honest, cleanly, and industrious, occupying themselves in fishing,⁴⁰ hunting, and cultivating a variety of vegetables.⁴¹ They carry on a considerable trade with foreigners in cocoa-nuts and cocoa-nut oil, cocoa, turtle-shell, cotton hammocks, canoes of callicalli, a very durable timber, etc., etc., which they barter for

³⁹ Called also Mandinga.

⁴⁰ Dampier (vol. i. 37) says of the Indians, "They make their lines both for fishing and striking with the bark of *maho*, which is a sort of tree or shrub that grows plentifully all over the West Indies and this bark is made up of strings, or threads, very strong. You may draw it off either in flakes or small threads, as you have occasion; it is fit for any manner of cordage; and privateers often make their rigging out of it.

⁴¹ "There grow on this coast vinellos in great quantities, with which chocolate is perfumed."

coloured calicos, shirts, calico trowsers, looking-glasses, beads, knives, cutlasses, guns, powder, hatchets, rum, brandy, tobacco, etc. A very profitable trade might also be carried on with them, in dye-woods, timber, gums, resins, etc. Their principal occupation is fishing for the turtle which abound near the kays, and hunting. They are very expert sailors, some of them having made voyages to the United States. They are very independent, and were never subdued by the Spaniards, to whom they bear great animosity;⁴² to English⁴³ and Americans they are very friendly, but do not allow them to land on the coast. The

⁴² Paterson, in his Report to the Directors, says of the Indians —“ They express a wonderful hatred and horror for the Spaniards, and seemed not to understand how we could be at peace with them.” “They pressed us very hard,” says Mr. Rose in his Journal, “to come and live by them, as also jointly to make warr with the Spaniards, whom they would engage upon the forfeiture of their heads, if we would but assist them but with 100 men and as many arms, with 2,000 of their own people, to drive them not only out of all the mines, which are but three days’ journey from us, but even out of Panama itself. We gave them fair words, and promised to go to the westward with them to view the coast, and if there were any convenient harbour for our shipping, we should be their neighbours” (Darien Papers, p. 68).

⁴³ That they did not always meet with a proper return for their kindness to the English, is shown by the following dispatch from Sir Charles Wager to Admiral Vernon, July 9th, 1740, written during the famous Portobello expedition—“I am told that the trading ships or privateers have behaved in such a manner to the Darien Indians, by abusing the women, and carrying some of the men to Jamaica and selling them for slaves, that we have lost their friendship, and that they have, for that reason, made peace with the Spaniards, and will join with them against us when they have the opportunity; and that we have done the same to the Musquitos. If it be so, it is an abominable thing, but not unlike that sort of Englishmen. I hope our troops will behave better.” This, however, has been forgotten by the Darien Indians, who are now, as will be seen in other portions of this pamphlet, ready to co-operate with us in this great undertaking.

traders are boarded, as soon as they anchor, by the Indians, who bring their produce on board themselves, and do not permit the captain or crew to go on shore. Their government is purely patriarchal, — the oldest and most experienced man in each settlement being accounted chief by general consent, and universally looked up to and obeyed as such. They are accustomed to the use of fire-arms, and are good marksmen, having also spears and arrows; but no knowledge of extracting the woorali or curare poison, though they have manchineel, the milky juice of which is a powerful irritant, but not strong enough to kill. Some woorali (corova) and poisoned arrows that I obtained from the Indians of the interior were procured by them from Choco, for the purpose of killing game; these little darts are blown through a long tube, called *borokera*, the aim being rendered steady by a little cotton of the *Bombax Ceiba* wrapped round one end; their deadly effect is almost instantaneous.

It is a very singular fact that these Indians have no names. When one is asked "*iki pe nukka*" (what's your name), he invariably replies, "*nukka chuli*" (I have no name). They are very desirous of receiving English names, and have often asked me to give them some, which I have done, giving the names of Fox, Henderson, Brassey, Haslewood, Wilson, Anthony, Vincent, and Cullen. There are many albinos, with pure white skin, and hair, and weak eyes. The women wear diamond-shaped gold nose rings, cut at one of the angles to allow their being taken out and put in; these rings are about an ounce in weight. Their legs and arms are also adorned with glass beads, strings of coral, gold trinkets, pieces of money, and tigers' teeth. They are very fond of gaudy ornaments; and presents of

some trinkets, pieces of scarlet silk and cotton, pictures, and some gilt buttons which I cut off an Armenian jacket that I purchased in Constantinople in 1848, quite established me in their good graces.

They have a great dread of the small-pox, which is one cause of their not allowing foreigners to mix with them. They also fear that they would take away their women; and another reason of their dislike to foreigners, is their idea that God made the country for them alone.

They are timid, and would not venture to oppose even a small body of men.⁴⁴ The Coast Indians live entirely on the Coast and the islands and kays off it, and do not go into the interior, while those of the interior seldom visit the Coast. The Coast Indians wear shirts and trowsers, but those of the interior usually go naked; the latter are very shy and retiring in their disposition, and keep aloof from the Granadian inhabitants in the south, very rarely visiting Chepo, Chiman, or Yavisa; their occupations are hunting,

⁴⁴ "Thus (says Dampier, vol. i. p. 23) we finished our journey from the South Sea to the North in twenty-three days; in which, by my account, we travelled 110 miles, crossing some very high mountains; but our common march was in the valleys, among deep and dangerous rivers. At our first landing in this country we were told that the Indians were our enemies; we knew the rivers to be deep; the wet season to be coming in; yet excepting those we left behind, we lost but one man, who was drowned. As I said, our first landing-place on the south coast was very disadvantageous, for we travelled at least fifty miles more than we need have done, could we have gone up Cheapo River or Santa Maria River, for at either of these places a man may pass from sea to sea in three days' time with ease; the Indians can do it in a day and a half, by which you may see how easy it is for a party of men to travel over. I must confess the Indians did assist us very much But if a party of 500 or 600 men or more were minded to travel from the North to the South Sea, they may do it without asking leave of the Indians; though it be much better to be friends with them."

fishiug, and cultivating vegetables for their own consumption; their principal settlements are on the upper branches of the Chepo, Chiman, and Congo, on the Tuquesa, Ucurganti, Jubuganti, and Chueti, branches of the Chuquanaqua, and on the Pucro and Paya. They have a very great dislike to the negroes, and generally kill any of them who have the temerity to ascend any of those rivers; in 1851 I was informed that they killed four negroes who went up the Chiman.

They place great faith in the divining powers of their Priests or Leles, who advise them in all important matters.

During my intercourse with this noble race of Indians, in my various journeys in Darien, in 1849, 1850, 1851, and 1852, I have been invariably treated by them with the greatest kindness and affection, and the most unlimited hospitality, everything in their possession having been freely and cheerfully placed at my disposal; and although I boldly and openly, at the very first, explained in detail the object of my repeated and daring trespasses into their territory, which, I verily believe, none before me, except the Buccaneers and the Scotch colony, who came in strong force, and as allies, had ever invaded without the sacrifice of his life; and showed my maps, with my projected canal route across their country, and was, therefore, known to them as the man most to be feared by them, and whose death would be to their decided interest; yet not one of them ever raised a weapon against me, and when, on one occasion, two or three of the most hot-headed urged my instant death, they were immediately silenced by the others, and even those two or three, who, I expected, would follow me into the bush and dispatch me with their arrows or

cutlasses, in the depths of the forest, not only did not condescend to take this advantage of an unfriended, isolated white man, but afterwards even embraced me and made peace with me.

I have made this digression, and entered at this length into a portion of my personal adventures in Darien (being desirous, in this short pamphlet, to confine myself strictly to the facts elicited in my explorations, and not to refer to the dangers and difficulties necessarily to be overcome to arrive at them) in order to urge, as loudly as my humble advocacy can, the justice and policy of dealing with this noble race, in all future transactions, in a spirit of conciliation, friendship, and frankness, with the strictest integrity and honour, and without any jealousy or unfounded apprehensions of hostility: and I may express a hope, that it will not be forgotten that, when a white man, hungry, shivering, even in that climate, from exposure, for some days, to almost unintermitted deluges of rain, and nearly naked, rushed unannounced, a strange apparition, into the Indian's hut, he was not driven away.

FOREIGNERS TRADING ON THE COAST. The principal foreigners who trade on the coast, are Captains Ramon Iglesias, Abraham, Ricardo Illhes or Ellis (of Curaçao), Juan Seva (who has been twenty-six years in the trade, and never landed on the coast), Zephyrino, Richard Marks, the Captain of the Abingdon, of Baltimore, etc., etc.

The Indians speak very highly of old Captain Shepherd, now of San Juan de Nicaragua, or Greytown, who once traded with them in his schooner, Mandeville; also of Captain Latham, a former trader, whose widow resides at Carthagena.

A short vocabulary of the language will be found in the Appendix.

VILLAGES ON THE COAST.—The principal villages on the Atlantic coast, are Carreto, Sassardi, Navagandi, Putrigandi, Cuiti, Pitgandi, Rio Monos, Playon Chico, Playon Grande, Rio Azucar, Rio Diablo, Carti and Mandinga.

CARRETO has about twenty huts, thatched with palm-leaves; the principal native traders here, are Bolivar, Trueno, and Smith. Trueno has been in Baltimore, Philadelphia and New Orleans, and speaks English and Spanish. None of them have any knowledge of the interior, nor did they know even the names of Moreti, Sucubti, etc., at the head of the Chuquanaqua, though so near to Carreto. They told me there is a small village a little distance inland of Carreto. I enquired for a boy named Jose Pio, who was reared by a Spaniard at Yavisa, and whom I was told I should find at Carreto; but learned that he had gone back to Yavisa. Smith spoke sharply to a young Spaniard I had brought with me from Carthagená, and seemed displeased with me for bringing him.

At the mouth of the **AGLASENIQUA**, or **CALEDONIA** River, there are five huts, as I have mentioned above; and about two leagues up the river a small settlement. At Caledonia resides an old man, named Robinson; and up the river one called Juan Seva. Denis, the principal man at Sassardi, who has great influence over the Caledonia people, was the person who prevented Messrs. Gisborne and Forde from penetrating farther into the interior from the north side.⁴⁵ Upon my sending a message to this man, he

⁴⁵ Had not a tedious passage up the Magdalena, a protracted Session of Congress, and the necessity of waiting until the con-

came down to Caledonia with about forty men, to see me. I endeavoured to get his consent to the cutting of a canal, but he would not entertain the proposition, and requested me to bear a message to the Queen of England, to the effect that he did not wish her to send any of her people to the coast. He was very friendly, however, called me his "aya nugueti" (good friend), and came with me to Sassardi where I gave names and presents to his boys, whom he promised to let me take to England upon my next visit to him—he even offered to take me in his own canoe to Portobello or Limon Bay, but afterwards declined, saying, that he could not get men: I believe the real cause to have been a report of the existence of small pox and cholera at Limon Bay. Before taking leave of me, he said, that if the old men of the other settlements were willing to allow foreigners to come and cut a canal, he would not object; and advised me to return again and hold a formal meeting of the old men.

At SASSARDI there are about twenty huts. In one of these lives John Bull, who was sick at the time of my visit. There is another John Bull on the coast at Mandinga. A

cession was granted, detained me in Bogota until the 4th of June last, and beyond the time when I had arranged with Sir Charles Fox to return to the coast and join the engineers at Carthagená, Messrs. Gisborne and Forde would not have left that city, nor have landed amongst these Indians without a protector, all the Caledonian and Sassardi Indians having been my personal friends. When I arrived at Caledonia Bay from Carthagená, Messrs. G. and F. had been ten days gone, and I found a great deal of excitement to prevail along the coast in consequence of their attempt to traverse the country; but upon my explaining that they were friends of mine, the Indians became satisfied. Whilst I remained in Caledonia Bay, the Aglaseniqua river was so flooded from the heavy rains, that I could not ascend it or send a message to my friends in the settlement above-mentioned.

small schooner from the Atrato, belonging to Faustino, and an American yacht called in while I was here. A little west of Sassardi there is a deep valley, in the Cordillera of the coast.

PUTRIGANDI has about twenty-five huts: the principal trader here is William or Julian. He was very friendly to me, and desirous of information about the customs of other Indian nations that I had seen; as the Accaways, Arrow-aaks, Caribisce, Warrows, Macousies, etc., of British Guiana and Venezuela, the Indians of the San Joaquin, and Sierra Nevada of California, etc., etc. He showed great desire to learn a little English, and asked me to give names to his sons. At this place I was present at a Chicha feast. On my way from Sassardi to Putrigandi in a small sloop, we were followed by a large canoe, with about ten paddlers, and a number of men armed with muskets, who kept up a continual firing. As they were pulling directly towards us, whilst we lay becalmed, the Captain thought they were coming to kill me on account of the propositions I had been making. However, I asked one of the Indian boys on board what they were firing for, and he said "Quenchaqua Tule tumati purkwisa" (one great Indian is dead); which explained the matter. Shortly afterwards the canoe steered in to Navagandi.

Rio Monos and Pitgandi are very small settlements; cocoa-nuts grow all along the sea-beach west of the former.

Playon Chico has about twenty huts.

Playon Grande has about thirty huts, and a sea-beach four miles long. The principal men here are William Shepherd and Tom Taylor.

At Azucar, or Sugar river, the chief man is Crosby.

Rio Diablo is the largest settlement on the coast, and has about forty huts; here live Story and Jack Bragg.

At Cedar river, or Carti, in the Bay of Mandinga, are Vicuña, William and Tom Dadd.

At Mandinga lives John Bull.

At Yantopoo, an island opposite Carti, lives Campbell. John Bull, Vicuña, and Campbell, were present at the signing of the treaty of peace between the Spaniards and Indians in 1788 or 1789, at Carthagena, Portobello, and Panama. John Bull was baptised at Portobello, the Chief of Police there being his godfather. Campbell asked me to prescribe for his daughter, and wanted some vaccine lymph which I sent to him from Limon Bay.

At Perdon Island, off Cape San Blas, I saw three children by the same father and mother, two of whom were albinos.

The Indians say that there are settlements a little distance inland; but as there is not a single patch of cultivation visible from the coast on the highlands in the interior, their population must be very scanty.

POPULATION OF THE COAST.—I do not think the population of the whole coast, from the Atrato mouth to San Blas, amounts to 3,000 souls. There are no Indians in the interior nearer to the proposed canal route than those of the Chuquanaqua on the east, and the Chepo or Ballano on the west. Those would offer no opposition. In 1747, Governor Don Joaquin Valcarcel de Miranda calculated the whole Indian population of Darien at 5,000 families; and I have reason to believe that the number has very much diminished since that time.

At Palenque, Culebra, Nombre de Dios, and Portobello, I made minute enquiries as to the probability of the Indians

opposing the landing of foreigners, or the opening a road, and was informed by the people who have great intercourse with the Indians, that they are very timid, and would not attempt to resist a force of a dozen men, who might safely traverse the whole country. The people of those places (negroes) expressed a very great desire for the opening of a road and canal, and promised to go down to Caledonia to work as soon as operations commenced.

In PORTOBELLO, the Jefe Politico informed me that old John Bull, of Mandinga, his godson, had been there some time before, that he had mentioned his having heard of my intending to open a road, and expressed his dislike to such a project; but did not say he would oppose it. Here, also, I met Captain Abraham, who remarked that my project would destroy his trade, and oblige him to leave the coast; for the Indians, he said, would retire into the interior, from fear, as soon as the foreigners came.

The following very interesting account, which I took from a very aged negro, will throw some light on this part of the subject.

DECLARATION of Santa Anna Ceballos, Portobello, 13th July, 1852.

"Santa Anna Ceballos, negro, 101 years of age, native of Portobello, declares that he was corporal of artillery in the establishment of Mandinga, in 1786, when General Arebalo, and his second in command, Don Felix Malo, were there. At the same time, the regiments of Estremadura and Isoria, consisting of 2000 men, arrived at Portobello, on their way from Spain to Peru, but none of the men of those regiments went to Mandinga, in consequence of letters having been sent to the King of Spain, advising him to send only negro soldiers, or natives of Veraguas, to Darien. This was principally owing to an attempt at insurrection

some time previously, by the negroes of Panama and Veraguas, and it was intended to punish them, by enrolling them as soldiers to serve in Darien against the Indians; and also because the negroes were better skilled in clearing bush, and tracking Indians in the forest than white men. While Santa Anna Ceballos remained at Mandinga one year and two months, there were always 100 soldiers there.

"No attempt was made by the Indians to prevent the clearing of the land, nor did they ever attack the establishment. He had never seen so many as fifty together.

"The Indians never killed any of the soldiers, nor any Spaniard, except some one or two who got astray in the bush, or went about trading, or selling plantains. Whenever Indians happened to pass the fort, the soldiers used to fire their guns, and the Indians would make off. The first Indian who came to the establishment, was Capt. William Andrew Lé tong (probably Latham), who brought proposals for a peace on the part of the Indians.

"Every Sunday the soldiers went out to the plantain grounds of the Indians to cut plantains, and were never attacked. There was a post from Panama to Mandinga, which crossed by way of Chepo. The postman was a negro soldier of the stationary company of Panama, with four other soldiers of the same company for his escort; they always crossed the Isthmus safely, and were never attacked. The garrison of Mandinga never made any sallies against the Indians. On one occasion no provisions or money were sent to the fort for two months, and the men mutinied and threatened to return to Portobello. General Arebalo came from Carthagena to punish them, and ordered one out of every ten men to be shot, but afterwards pardoned them, having tested their fidelity by the following *ruse*:—Don Felix Malo ordered a company of eight men, who went to fetch water, to take their muskets with them and fire them off when they got near the fort on their return; immediately upon hearing the reports, all the soldiers rushed out to defend the fort, supposing it to be an attack of Indians,

leaving behind them on a table their two months' pay, which General Arebalo had brought, and was in the act of paying them. Arebalo then reproved them for the mutiny, and related to them that in the war of Italy, the soldiers did not mutiny, even when reduced by famine to eat one another. When Santa Anna Ceballos left Portobello for Mandinga, Colonel Don Andres de Arisa went in the same vessel, and afterwards to Carolina and Spain. Arisa used to bind up his hair and go through the bush like an Indian, with a gun, sometimes alone and sometimes accompanied by his Lieutenant Orencio, an Indian of the South of Darien, who was very faithful to him, and was afterwards killed by the Indians in the South. The Indians were very much afraid of Arisa, because he was the most active of the Spaniards, and had established forts in the South of Darien. He was a very little man. Santa Anna Ceballos's captain was Pedro Rifa, a Catalan, who afterwards went to the fort at Cayman (on the east side of the Gulf of Darien); and died there. Another of his officers, Don Antonio Espitalete (whose name appears as one of the witnesses to the treaty mentioned above), went to Carolina; he came from Spain with the regiment of Murcia, which, with that of Napoli, was sent over to relieve La Reina.

"The only occasion on which an Indian was killed, was one day that Quintana and Orencio went to Copola Island, to gather cocoa-nuts; when Quintana smelled Indians, fired, and killed one, upon which the Indians blew the *fatora* or pipe, and ran away to their canoes.

"He considers that the young Indians are friendly, though the old men are averse to intercourse with foreigners. The present Indians do not know how to fight, and would not attempt to resist a small body of men. All the most warlike Indians have died off. The English taught them the use of guns; but they are very much afraid of cannon (*kinkilitumati*). The present Indians are quiet and peaceable.

"William once asked Don Felix Malo, what sort of a

weapon the bomb was. Malo told him to come the next day, and he would show him. The next morning, at nine o'clock, William came, and the bomb was fired; whereupon he said it was a diabolical invention, and never returned to the fort again.

"During his stay at Mandinga, Colonel Robert Hodgson, an English engineer, who attempted to land at Caledonia with a body of men, was taken prisoner by a packet-boat of the king. He saw him at Portobello, where he was allowed to walk about, and used to look with a very powerful telescope from the top of the high hill behind Portobello. Antonio Espitalete used to keep him company, and said he was a very clever man. He relates, that an English frigate appeared off the coast, and seven Spanish vessels went to attack her; but when they came near, found that she had the plague [ship-fever] on board, and left her. An Englishman named Zapata⁴⁶ [probably Soppit], who had many slaves in Veraguas, used to smuggle on the coast: his partner was taken by the *guardacostas*, and put to death.

"The fort of Mandinga was abandoned in consequence of the peace with the Indians.

"The fort of Concepcion was established shortly after that of Mandinga: one hundred men landed there, and erected a battery. On the ninth day after their landing, the Indians came and fought from six to ten A.M.: Arisa and Orencio were present. There was only one Spaniard killed; but it was not known how many Indians, as they immediately carried off those who fell. The Indians kept in the bush, and Orencio called out to them to come out into the *campo raso* (cleared ground) like the Spaniards; but they would not. The Indians fought with arrows and lances, called *ichagüala*. This was the only fight in the establishment of Concepcion.

"Of Carolina fort, in Caledonia Bay, he knows nothing,

⁴⁶ There is a half Indian son of Zapata's on the coast, but he was absent at the time of my visit, and I sent a message to him.

except from what he has heard from other soldiers of that time. Arebalo went there from Mandinga, with a hundred men whom he had brought from Portobello, and established the fort, without any opposition, in 1785: the Indians made no resistance to his clearing and making plantations. At four A.M. on the fourth or fifth day after his landing, some Indians entered the precincts of the fort, and asked, 'Where is Arebalo?' Whereupon the soldiers fired, and the Indians fled, losing some killed; nor did they return till a long time after, when they came to make a peace.

"He heard, at that time, that a pilot named Peñan, living at Carolina, became insane, and used to go out very early every morning into the bush, and hide until some soldier passed, when he would kill him with a dagger, and then return to the fort; and that he continued thus to kill some one almost every day for some time, until he was seen to kill a man by a soldier who went out at four in the morning. Upon this being reported to Arebalo, who had believed that it was the Indians who were killing the men, he was shot. There were no men lost in Carolina except those killed by Peñan.

"He had heard much of Carrera and Garcia, who were trying to make a road from Principe to Carolina; but did not know them, as they were in the south.

"He says, that the Darien Indians are much afraid of the Mosquito Indians, and that the king of the Mosquito territory once offered to conquer the Darien Indians for the king of Spain; but the latter was afraid the Mosquito would be more dangerous than the Darien Indians. The establishments only lasted five years, and were withdrawn on account of the peace.

"He also says, that before M'Gregor's time (1819), he once fired from the battery of Portobello at the 'Mystico Cupido,' a Spanish man-of-war, just as she was entering the harbour, and carried away a mast and killed six men—mistaking her for a vessel of the enemy, as she had not hoisted her colours. She had left Portobello the day

before, for Carthagena, with 20,000 dollars on board, and had put back, in consequence of meeting the enemy's privateers."

This fine old man, who walks about daily with the aid of a stick, has his memory and hearing perfect, though he is nearly blind; and complains much of not having received any pension from the king of Spain for his long services, which continued until the taking of Portobello. His wife and another old woman, both nearly as old as himself, as well as Domingo de Ollos, and Estanislao Garcia, each upwards of ninety years of age, corroborated his statements.

The following document, from the Chief of Police of Portobello, attests the veracity of the old man above mentioned, and his comrades:—

(Translation).

Stamp of the
Republic.

"I, Jose Alesandro Cervera, Political Chief of the Canton of Portobello, certify that Dr. Edward Cullen has presented himself before me, soliciting to be furnished with whatever data may exist in the archives of this place, relative to the expeditions that were directed by the Spanish Government, from the year 1785, to the establishments of Mandinga, Concepcion, and Carolina, and there being no archives on this subject on account of their destruction at the taking of this place, in the year 1819, by the Colombian General, Gregor McGregor, I directed the said Dr. Cullen to seek for information from the old men, Santana Ceballos, Domingo de Ollos, and Estanislao Garcia, natives of this place, the first of whom was a soldier in the above-mentioned establishments, and the others accompanied their masters, as apprentices, and who enjoy good reputation, and are held for men of truth; consequently, I consider the

information given by them to be correct, and deduce from it, *that should a sufficient number of people come to the Coast, they will have nothing to fear from the Indians*, and at the request of the person interested, I give him the present, at Portobello, this 14th day of July, 1852."

(Signed) JOSE ALESANDRO CERVERA.

On the 17th July I sent Ponciano Ayarza, who had brought me from Carti to Limon Bay in his canoe, and has great influence with the Indians, from having been reared by them, back again to the Indians, to negotiate with them for their consent to the opening of a road and the cutting of the canal, and I have lately received a letter from him, dated Portobello, 10th of August, in which he states that he has arranged that four or six of the head men of the Indians shall come to Portobello to discuss the subject with the Jefe Politico, himself and his cousin, and expresses his confidence that they will give their consent.

In another letter, dated Sept. 27th, he states that one of the Indian captains had arrived at Portobello, and given his consent, and had returned to the coast to bring the others to Portobello, to a council with the Chief of Police on the subject.

THE CONCESSION.—The Government of the Republic of New Granada has conceded, by Decree of Congress, dated Bogota, 1st of June, 1852, the exclusive privilege of cutting a Ship Canal across the Isthmus of Darien, between the Gulf of San Miguel on the Pacific, and the Bay of Caledonia on the Atlantic—with liberty to select any other point on the Atlantic coast between Punta de Mosquitos and the west mouth of the Atrato, for the entrance of the Canal; and has granted, besides the lands necessary for the Canal and its works, 100,000

fanegadas⁴⁷ of land, to be selected in any part of the Republic.

All the ports of Darien have been declared free and neutral.

The concessionaires are Sir Charles Fox, John Henderson, Esq., Thomas Brassey, Esq., and Dr. Edward Cullen.

I beg to add here my humble testimony to the worth and many amiable qualities of that most hospitable and noble-minded gentleman, Patrick Wilson, Esq., of Bogota, of the firm of Powles, Illingsworth, and Wilson, of London; to his valuable aid I am greatly indebted for my success in negotiating with the Government of New Granada for the above privilege and concession.

Every possible assistance will be rendered by the Government of New Granada, for facilitating the preliminary and future stages of this great undertaking; and on the 1st of June last, the President of the Republic, General José Hilario Lopez, gave me, with that object, letters to the Governors of Panama and Choco, ordering them to afford every aid in their power to me and the engineers who might proceed to the Isthmus to make the survey.

The Governments of Great Britain and the United States, in accordance with the provisions of the Bulwer and Clayton Treaty, signed at Washington, April 19th, 1850, will extend their joint protection to any Company undertaking the construction of this Canal, which will, most likely, be a united British and American enterprise.

Negotiations are about to be entered into by the two governments, in accordance with the 2nd article of the treaty, to determine "the distance from the two ends of the

⁴⁷ About 200,000 acres.

canal" within which vessels bound to or from it, "shall, in case of war between the contracting parties, be exempted from blockade, detention or capture by either of the belligerents." ⁴⁸

The direction of the Company has been confided to merchants and capitalists, whose character and position are a guarantee for the successful carrying out the great object in view, and who will act under a Royal Charter of Incorporation: as a preliminary to the latter, I obtained a certificate of Provisional Registration in December, 1850.

The names of Messrs. Fox,⁴⁹ Henderson and Brassey, are so identified with the progress of the age in engineering science, that they afford a sufficient security for the completion of the work with speed, and in a style befitting its vast importance.

MEANS OF MAKING THE ROAD AND CANAL.—The preliminary road, as suggested below, can be cut entirely by natives (Granadians)⁵⁰ who would also perform all light

⁴⁸ See treaty in Appendix.

⁴⁹ See the report in the "Morning Advertiser" of 2nd December last, of a meeting of the Eastern Steam Navigation Company, held at the London Tavern, Bishopsgate-street, H. T. Hope, Esq., in the chair; at which meeting Sir Charles Fox said, "He might mention, as in some degree connected with the enterprise in which they were about to enter, that he had, with his partner, Mr. Henderson, and Mr. Brassey, the great contractor, signed a contract for the construction of a great Ship Canal across the Isthmus of Darien, designed by Mr. Gisborne, the civil engineer. That canal was proposed to be a cut 30 feet deep at low tide, 140 feet broad at bottom, and 160 feet at low water surface. Such a cut as that they considered equal to the trade of the world, as well as for permanent safety and rapidity of transit."

⁵⁰ "The population" (the Granadian) "is nowhere industrious," says Colonel Lloyd, in his notes on the Isthmus of Panama, read before the Geographical Society, March 13th, 1831, "though strong and enduring under occasional fatigue. Their indolence is not to be attributed wholly to the climate, or their own

work on the canal. For the cutting of the canal, besides

original constitution, but chiefly to the extreme fertility of the soil, and the comparative ease with which a man and his family can derive subsistence from it. With a gun and axe, individuals, otherwise unprovided, take up their residence in any corner of the woods, and in two or three days will have erected a substantial hut, with upright posts and crosspieces, as firmly fastened with vines as any nails or clamps could make them, and thatched with the split branches of the wild palm-tree, one of the best materials possible against wind or rain. The family, at their leisure, then form a stage or second floor, to which a piece of balsa, cut with notches, serves to ascend; and a few stones for a fireplace, an iron cooking pot, and some pieces of wood to sit on, complete the establishment. The nearest trees to the habitation are cut down; fire is applied to the more distant, which after burning some days, leave the ground ready for a crop. Advantage is taken of the first rainy season to get in the requisite seeds; and for everything else implicit reliance is placed on the gun. None of these people stir even to work without this their constant companion, generally an old musquet; and in an hour or two they are certain of bringing down as much animal food as they can consume in a week, with sufficient besides to barter at the nearest village or town, for rice and plantains." But this indolence does not avail to prevent their employing themselves in any great public works, as has been shewn in the case of the Panama Railway. "There are within the province," says Colonel Lloyd on this head, "several regiments of militia, formed by the lower class of people and Indians, excellent workmen in felling timber and clearing ground, and particularly apt in acquiring any mechanical art. They have advantages over Europeans which, from the nature of their climate, will always exist. Their habits are most simple. With a piece of *tasajo*, or dried beef, a few plantains, and some rice, they are provided with the sustenance on which they live from youth to age; and with a skin in their huts, on which to sleep, and a block of wood to sit on, their establishment is complete. Their dress never alters, winter or summer; it consists of a short brown holland or check shirt, and a pair of *calzoncillos* or drawers, reaching to the knee (which are generally cast off when at work). Shoes are known to them only as articles of great luxury; they seldom want anything to protect their feet; and if they do, a piece of hide is used, cut and dried very neatly, as a sandal. Their common wages are from two to three reals a day (1s. to 1s. 6d) with their meals, which as they are few, may cost about 4d. per day more. These men, there is no doubt, the Government would gladly place at the disposal of a Company, with individuals to command and keep them in order;

coloured⁵¹ people from New Granada and the adjacent republics, numbers of acclimated Irish and Germans can be got from New Orleans and the canal works in the United States; hence few labourers from England would be required, although, from the absence of swamp, I consider the country to be healthy, and should not apprehend any sickness amongst English labourers, if of temperate habits.

The great quantity of rain which falls in Darien, the prevalence of invigorating currents of air across it, from sea to sea, and the equable temperature of the climate, which is not subject to great vicissitudes, tend, most materially, to lessen the effect which the decomposition of the vegetable matter would, under other circumstances, have in the developement of intermittent and remittent fevers, and to mitigate the violence and diminish the frequency of the attacks of those diseases should they occur.

and in one instance this has been already offered, though not accepted, to the extent of one thousand men." When I was last at Panama, the Governor offered me a company of soldiers to assist me in clearing bush-paths, but as I was then about to return to England, I could not avail myself of his very kind offer, though I shall do so at the earliest opportunity.

⁵¹ "Ordinary labourers," says Captain Fitzroy, p. 28, "must be sought among the darker varieties of the human race. They may be obtained from several places in the West Indies, from the United States, from the Kroo coast of Africa and Liberia, from the Philippine Islands, China, Polynesia, the East Indies, and various parts of America. Of all these, the Kroomen and the Chinese would probably be the most industrious and manageable. On the correct treatment of labourers, and their equitable and prompt payment, very much would depend; but this branch of the subject demands separate consideration. Next to the supply and management of adequate funds, it is the most important auxiliary."

I need not point out that Mr. Brassey, who has so successfully carried out so many stupendous undertakings, and has had under his command such vast bands of navigators—the industrial armies of peace—is not likely to fail in this department of the construction of the great Ship Canal.

The heavy showers of rain absorb the málaria and wash away the decaying vegetable matter, during the rainy season; whilst, in the dry season, the vapours floating in the atmosphere are diluted and dissipated by the constantly prevailing currents of air, which, from the level character of the country, and the absence of deep, narrow valleys, can never be impregnated to any dangerous degree, with miasmata.

The frequency of thunder and lightning, at short intervals, in Darien, tends also to clear the atmosphere, and render it more pure and wholesome.

Moreover, the forests of Darien being less encumbered with brushwood or under-growth, and more open and park-like than most tropical forests; the quantity of vegetable matter in a state of decomposition is comparatively small, and the volume of morbidic gases evolved from it inconsiderable.

That the heat of the climate is not incompatible with great physical exertion I can assert, from personal experience, having endured more prolonged bodily fatigue in Darien and other tropical climates, than I have ever borne in Europe; and I can refer to the robust forms, great physical powers, and uniform good health of the *bogas*, or canoe men, who pole up the Chagres River under a blazing sun, as a proof that mere heat neither pre-disposes to disease nor enervates.

Strict attention to their personal comfort; regularity in the supplies of good, wholesome food; dry, well-ventilated housing (the houses to be raised on piles some feet above the ground); regulation of the hours of labour; facilities afforded them for bringing out their wives, and thus establishing a home in the place; the establishment of libraries,

amateur bands of music, and other sources of relaxation⁵² in their leisure hours, and a well organised system of medical police—on the part of the Company—and total abstinence from the baneful stimulus of strong drinks, and attention to cleanliness and the maintenance of the healthy functions of the skin by frequent bathing—on their own part—would, I am sure, enable English labourers effectually to resist the influence of change of climate.⁵³

⁵² I consider attention to this point to be of vital importance, from having observed, in the course of an extensive practice in many tropical countries, that a slight form of home-sickness (*nostalgia*), originating in the want of any source of amusement in their leisure hours, is a grand predisposing agent in the development of climate-disease amongst Europeans.

⁵³ By the surgeon's report on 191 emigrants, who went out from Scotland under the Colombian Agricultural Association in 1824, and who were characterised by the superintendent as "such a set of people, with a very few exceptions, as could not have been found in any country," we find that the most sickly months of the year were passed over by a population of drunken adults, and a large proportion of children, with a mortality about one-fifth less than that of the most healthy part of Europe.—See *Edinburgh Review*, vol. xlvii., Jan. 1828.

"The climate of the Isthmus may be raised as an objection against its being a fit field for *emigration*. It is not attempted to be denied that the town of Chagres, and the now useless city of Portobello, are unhealthy; but in the forests, and in the interior generally, although there is much rain, the temperature is by no means high, in comparison with other inter-tropical stations: and, from an experience of both, the author can confidently state, that the country is generally more healthy than any of the West India Islands and Colonies. One good proof is, that the author and his companions passed nearly two years in the forests, the greater part of the time in sheds or huts constructed by themselves, from day to day, or week to week, with indifferent living, and always barefooted; yet they never suffered."—*Paper read by Colonel Lloyd before the Institute of Civil Engineers, Dec. 11th, 1849.*

Colonel Lloyd, in his Notes on the Isthmus of Panama, published in the "Philosophical Transactions," tells us "The seasons are two—summer, or dry; and winter, or rainy. The first commences about the end of December, and lasts till April; the latter continues from April to December. The quantity of rain

But should it not be deemed advisable to employ English labour, I can, from personal experience derived from two years' residence in China, and also an extensive acquaint-

which thus falls is prodigious ; but its amount varies in different places ; the clouds hang chiefly over the wooded heights ; and at Porto Bello, in particular, which is closely hemmed round by them" (it will be remembered that the hills of Darien are two miles from the shore) "the rain descends in torrents, frequently accompanied by storms of thunder and lightning of the most terrific description. Where the ground, to any extent, is level, however, and has been cleared of its wood, a great difference is perceptible ; and at Panama the following alterations may be observed :—In April, the weather becomes cloudy about noon ; but after drizzling for half an hour, clears up. In May, from nine to eleven, it is dull, with slight rain ; the afternoons being still fine. In June, there is rain every morning and evening ; but the mid-days are fair. As the season advances, the rain gradually increases ; and is incessant throughout July, August, September, and October. In November, the nights are always wet and cloudy ; but through the day the sky begins to break. December brings a further improvement. And in January, February, and March, a shower of rain is as uncertain as a gleam of sunshine at other seasons of the year. One very remarkable phenomenon occurs throughout the whole Isthmus : on the 20th of June the rain ceases for five or six days ; the sun shines out during the whole day with the utmost splendour, nor is any instance known of irregularity in the recurrence of this break in the ordinary course of the seasons. It is accordingly reckoned on by the inhabitants with great confidence, and called *El veranito de san Juan*, or the little summer of St. John. The family of the British Consul resided four years in Panama without an hour's sickness ;" and Colonel Lloyd and his companion were seventeen months in the country, during the whole time exposed to the utmost rigour both of sun and rain, yet with entire impunity. The climate, we are told, may be called generally healthy, though a considerable mortality sometimes occurs, which, as Colonel Lloyd tells us, "may almost always be traced to excessive indulgence, especially in the use of raw fruits and vegetables, and occasionally, also, to the quality of the animal food, which at particular seasons is, he thinks, injuriously affected by the excessive richness of the pastures."

I may note here that though the Scotch colonists arrived in Darien in the rainy season, all the accounts are unanimous in favour of the climate, though Mr. Rose's diary in the papers of the "Bannatyne Club" shews that there was no want of rain.

ance with Chinese in California, confidently recommend Chinese labourers as steady, industrious, orderly, manageable, possessed of great physical strength, and perfectly capable of enduring any climate, from being accustomed to work in paddy-fields. The extensive network of canals in China, forming the most gigantic system of internal navigation in the world, and the permanence of their construction, amply attest the peculiar fitness of that people for works of this kind.

As to the possibility of procuring Chinese there is no doubt; the law prohibiting the emigration of Chinese has long been a dead letter; so much so, that I have seen numbers of passengers embarking openly at Amoy and Whampoa for Singapore and Java, without the authorities manifesting the slightest intention to detain them. Since the discovery of gold in California they have been emigrating voluntarily, on their own resources, and their spirit of adventure and industry are leading them by degrees to the west coast of South America:⁵⁴ already the pioneers of a not

⁵⁴ What has happened since in California, shows how correct were the views adopted by a writer in the "Edinburgh Review" in 1809 (vol. xiii., p. 284—5) speaking of the then prospects of a Ship Canal, now so much enlarged by the gold discoveries.

"Is it too much to hope, that China and Japan themselves, thus brought so much nearer the influence of European civilisation—made more constantly and powerfully subject to its operation—would not be able to resist the salutary impression, but would soon receive important changes in ideas, arts, manners, and constitutions; the hope rests, at least, on such strong foundations, that it seems to rise even to certainty; and then what glorious results might be expected for the whole of Asia, that vast proportion of the earth, which even in its most favored parts, has been in all ages condemned to semi-barbarism, and the miseries of despotic power. One thing, at least, is certain, that South America, which stands so much in need of industrious inhabitants, would receive myriads of laborious Chinese, who already swarm in

far distant exodus of Chinese have found their way to Peru, Chili, and Panama, and before many years shall have elapsed, great benefit will accrue to the world from the development of the resources of those countries by the peaceful and indefatigable black-haired race. So convinced was I of the great boon an immigration of Chinese would be to Demerara, Berbice, and the West Indies, that on my return from China in 1846, I urgently represented the subject to the attention of the Colonial Office, but the contract for the supply of Hill Coolies from India not having expired, the government could not then entertain the proposition.

It may appear a far-fetched notion; but it is my belief that a Chinese immigration will be the only effectual means of abolishing slavery in Cuba and America. The Chinese work for such moderate wages, work so well, and are so eminently adapted for the labour on cotton and sugar estates, that paid Chinese labour would, in the end, be cheaper than, and supersede, slave labour. Were the whole slave population of Cuba and America liberated, it would be necessary to introduce people to carry on the cultivation, as it is not to be expected that the liberated negroes would keep it up to anything like its present extent; now there are only two races who would suit the purpose, viz., Africans and Chinese, and from having often observed people of each race whilst engaged in field work, I would estimate the labour of one Chinese as equivalent to that of four Africans.

all parts of the Eastern Archipelago, in quest of employment and of food. This, to her, would be an acquisition of incredible importance, and the connexion thus formed between the two countries, would still further tend to accelerate the acquisition of enlightened views and civilised manners in China herself."

Another point to be taken into account is the superior prolificness of Chinese, as compared with Africans.

PROFITS OF THE SHIP CANAL AND PROPOSED TEMPORARY ROUTE.—As to the profits that must accrue from the opening of the Canal, the *Times* of October 15th, 1850, says, "The traffic that would pass through the [Nicaragua] Canal, estimated now on the basis adopted in 1843, would amount to £1,700,000, or 42½ per cent. on the outlay. In the hands of the most timid, this calculation could scarcely be reduced to any point that would leave the enterprise other than a legitimate and attractive one. But the great feature always to be borne in mind with regard to it is, that it would be so identified with the progress of the world, that its returns at any one period could never be taken to limit our ideas of what they would become hereafter. At the present moment, for instance, the calculations would be based on the existing tonnages of the various maritime powers, and the present position of the channels of general commerce; but the shipping of the United States doubles itself every fifteen years, and that of England still increases rapidly. The prospect of the changes to be wrought by the undertaking will appear still further beyond the grasp of any of the common conceptions of past experience.

*"It is the grandest physical work the world can witness."*⁵⁵

⁵⁵"No memorial of the power of human skill and exertion not even the Mexican Desagüe" (a canal 200 feet deep and 300 feet wide for a thousand yards, and above 100 feet deep, through an extent of 3,000 yards, executed within the last three centuries in central America, pronounced by Humboldt to be "one of the most gigantic hydraulical operations ever executed by men"); nor the wall of China; nor the pyramids of Egypt; would be more remarkable; while in practical and general utility to the whole world no other physical undertaking would bear comparison with

The past has seen nothing like it; and any similar fame must be equally denied to the future, since there will be no more hemispheres to join."

It must be observed, that, in the above estimate, the *Times* does not take into account the vast increase of shipping that must take place from the opening of a trade with Oregon, Corea, Japan, Tartary, and the Russian possessions in the North Pacific—from the increased trade with all other places on the east and west coasts of the Pacific—and from the fact that the Canal will be the route to all places eastward of Cape Comorin or Ceylon.

Moreover, it must be taken into consideration, that, as vessels would be enabled to make two or three voyages in the year instead of one, as at present, this circumstance would greatly increase the quantity of tonnage passing through the Canal. To the estimate of the *Times* should be added, also, the revenue that would be derived from towing vessels through the passage, from the transit of British and Foreign war-vessels and troop-ships, the carriage of mails, colonisation of lands, etc.

Preparatory to the operations on the canal, I would most strongly recommend the immediate formation of a road from Port Escoscés to Fuerte del Principe, or the mouth of the Lara. By merely clearing a mule path through the

such an achievement as a SHIP CANAL. The immense increase of easy, rapid, and popular communications between regions no longer remote; the wide diffusion of knowledge, and the spread of Christian civilisation, would undoubtedly be the inestimable consequences of forcing the barrier of central America. Of results so amply and so eloquently foretold by authors of established reputation, it would here be superfluous and presuming to say more than to express a patriotic hope that Great Britain will achieve them; and then throw open the grand work for the permanent benefit of the world."—*Captain Fitzroy.*

forest, a much better road could be made than the present line of transit, from Gorgona or Cruces to Panama, while the distance would be about the same that yet remains for the completion of the Panama railroad, viz. twenty-two to twenty-five miles. Such a road could be made in three months, for a very small outlay, by a party of bush clearers.⁵⁶

Owing to the great distance from shore at which vessels are obliged to lie off Panama (the anchorage at the Island of Taboga being eight miles distant), the frequent instances in which the fleet has been stranded, the long calms and violent squalls to which the Bay of Panama is subject, the insecurity of Limon Bay, which is quite exposed to the north, the very swampy character of the whole line of country, from Limon Bay to Panama, and its consequent unhealthiness, and the many other disadvantages under which it labours, the mercantile community of Panama would, if there were a road open, doubtless immediately remove to the Darien route, possessing, as it does, such fine harbours, and such facilities of loading and discharging cargo.

The Steam Packet Companies would send their steamers

⁵⁶“Although it is difficult,” says Captain Fitzroy, “to burn forests in a very wet climate, it *may* be done by first cutting a quantity of inner or solid wood, piling it in a great heap, and setting it on fire close to a thick part of the forest. The heat caused will soon dry the nearest trees, which will then catch fire; and when once a sufficient *body of heat* is generated, a rapid conflagration will follow. Green wood burns faster, and gives more heat than dry wood, under the influence of a fierce fire. Even on the humid banks of the Atrato, Cochrane (vol. ii., p. 452) ‘saw the underwood catch fire and burn rapidly, consuming a great part of the forest.’ The insalubrity,” even, “of Porto Bello was diminished by clearing away wood, and might be much improved by draining marshes, burning down forests, etc.”

to Port Escoscés and the Gulf of San Miguel, in preference to the insecure harbours of Limon Bay and Panama. In a very short time a flourishing town would be established at either terminus of the future canal; and it is no great flight of the imagination to suppose that, in a few years to come, Port Escoscés, the "key of the world, the door of the seas," situated as it is, in the centre of the world, will be the site of one of its grandest commercial cities.

Should the road be opened for the transit of goods, passengers, and specie, a very large revenue would be derived from it immediately. Upwards of 5000 persons⁵⁷ cross the Isthmus of Panama every month, and about 2000 that of Nicaragua. Each of these travellers must expend nearly \$50 for his passage. The charge for carriage of luggage or goods from Cruces to Panama is from \$10 to \$20 per cwt., and for a riding mule \$20. The revenue which would be derived from the transit of goods and specie would be very large. When I last crossed the Isthmus, the "transportation house" of Faber and Perkins were engaged in sending across thirty tons of goods from Cruces to Panama, at the rate of \$20 per cwt. There are many firms in Panama, Cruces, and Gorgona, engaged in the transmission of goods, as Campbell, Jones, and Co.,

⁵⁷ In a commercial calculation lately published, I find the following—"Upwards of 100,000 persons crossed the Isthmus of Panama during the last year. It is computed that the increased inducements and facilities for trade and emigration furnished by new lines of steam ships, will increase the travel to the Pacific Ocean to 130,000 persons." I need not point out how greatly these calculations have been exceeded in the past six months, from the sudden intercourse that has sprung up with our Australian colonies. Indeed, it is impossible to make an estimate of traffic or profit on this Ship Canal which, however enormous it may now appear, may not be exceeded by the mighty results that will ensue.

Garrison and Fritz, Joy and Co., Adams and Co.'s express; Zachrisson and Nelson, Maximino Perez, Mosquera, Hurtado and Co., Dr. Theller and Sons, Augustin Perez, Henrique, etc.

As the saving that would be effected by the choice of this road is too palpable to admit of competition in any part of the Isthmus between North and South America, there can be no reason for doubting the favourable conclusion that the traffic by the Panama and Nicaragua routes would be diverted to this line. Were the Panama Railroad Company to abandon their present line, and make arrangements to construct a railroad on this route, they would have only the same distance upon which to lay down their rails that yet remains uncompleted on their own line, with a much healthier country, and also the great advantage that large vessels could come up to the terminus at Port Escoscés, on the Atlantic side, and at Lara Mouth, on the Savana.

The Panama railroad, a most stupendous work, considering the excessively swampy nature of the country over which it has been carried, has been completed as far as Barbacoas (on the Chagres River), 26 miles distant from its terminus at Aspinwall, on the island of Manzanillo, in Limon, or Navy Bay; the remaining portion from Barbacoas to Panama, 23 miles, has, I believe, been commenced; at présent, goods and passengers, after leaving the railroad, are transferred to canoes, which are poled up the river amidst numerous shoals, and against rapids, to Gorgona, in the dry, or Cruces, in the rainy season; and from either of these places they are conveyed by mules to Panama, 21 to 24 miles distant, over a road (so-called), the difficulties, obstructions, and dangers of which, baffle description.

Besides the present passenger traffic across the isthmus,

which is principally to and from California, it may be expected that, in a short time, the emigrants to Australia will take the Isthmus route. The Australasian Pacific Mail Steam Packet Company's ships Kangaroo, Dinornis, Emu, Black Swan, and Menura, averaging 1594 tons each, will commence running next year from Panama to Australia; and all light goods for Australia, New Zealand, and the islands in the Pacific, will be forwarded across the Isthmus. By this Company's steamers Sydney may be reached in from fifty to fifty-five days from Southampton.

Within a few months, also, the vessels of the Australian Direct Steam Navigation, and the British and Australian Clipper Steam Packet Companies, will commence running and will convey goods and passengers to Australia *via* Panama.

By this road, passengers could cross the Isthmus in eight or nine hours, whilst by the present route two days are required.

Mules can be purchased cheap at Paita, in Peru, while excellent oxen for waggons can be bought in Costa Rica,⁵⁸ and at Barrancas, Puerto de las Tablas, or Angostura, on the Oronoco, exceedingly cheap. The land carriage being only twenty-two to twenty-five miles, the expenses of the whole service on the road would be altogether insignificant.

In conclusion, I beg to repeat my confident opinion, that an attentive consideration of the advantages of this route,

⁵⁸ "At the present moment, Costa Rica furnishes to Panama and other parts of the Isthmus, large supplies of cattle. The price of a bullock on the pastures of Costa Rica is four or five dollars; on the sea-coast, ready to transport, from ten to fifteen dollars. In addition to these may be named deer in the forest, wild boar, swine, and hares; wild turkeys and ducks; with many other land and water fowl fit for food."—*Costa Rica Report*.

viz., its shortness, the excellence of its harbours, the low elevation of the land, the absence of bars at the Savana and Tuyra mouths, the depth of water and great rise of tide in the former, its directness of course and freedom from obstructions, the healthiness of the adjacent country, the exemption of the coasts from northers and hurricanes, the feasibility of cutting a canal without locks, and the absence of engineering difficulties, will fully justify me in asserting it to be the shortest, the most direct, safe, expeditious, and in every way the most eligible route for intermarine communication for large ships.



APPENDIX.

VOCABULARY OF WORDS IN THE LANGUAGE OF THE TULE OR DARIEN INDIANS.

| | | | |
|----------------------|---------------|------------------|----------------|
| water | tee | chief | chogualipeti |
| fire | cho | chief's daughter | chogualipeti |
| sun | ipé | | echisqua |
| moon | nee | friend | aya |
| stars | eeeeskwa | bow | kinki |
| trees | chowala | arrow | cheekwa |
| leaves | chowalka | poison | corõva and inã |
| house | neka | axe | akana |
| man | mastõla | knife | eystina |
| woman | pundõla | tobacco | guaãla |
| boy | machigua | sky | nibtalã |
| girl | punagua | morning | pani |
| child | machi totoqua | evening | chetogi |
| big man | mastomati | rain | teeguiyeti |
| little man | mastoltoqua | earth | naba |
| thunder | marra | valley | negnepa |
| chingo (small canoe) | ultotoqua | island | tuboo |
| tiger | achuieti | salt | palu |
| lion (large tiger) | achukiniti | wood | chõõ |
| river | tiguala | meat | chana |
| iguana | arri | dog | achu |
| lagarto(cayman) | thayma | mosquito | kwi |
| snake | nagupe | bird | chikwi |
| turkey, wild | chigli | eggs | chikwiala |
| parrot | quackwa | red | kibniti |
| guacharaca | charcaca | large | tumati |
| picolargo | guelleguelle | little | totogwa |
| deer | cogue | white man | chipugwa |
| turtle | patti | black man | chichiti |
| my husband | an-chugui | handsome | itanlegi |
| my wife | am-pundola | ugly | yagitaglegi |
| my son | an-uchu | alive | tula |
| my daughter | am punagua | dead | purkwisa |
| my brother | angmechati | cold | tampe |
| sister | anuika | hot | ugueti |
| heart | quakki | this | iktigue |
| blood | ape | that | ugue |
| | | all | pelo |

| | | | |
|--------------------|-----------------|------------------|------------------|
| much | yēē | there are stones | tee ginge akkwa |
| who's there ? | togwachi ? | (rocks) in the | |
| near | iptigine | river | |
| to-day | imūpe | there will be | iptigine dadogue |
| yesterday | chae | much rain | imimutikiwito- |
| yes | ēē | to-night | guontigue an- |
| no | chuli | | thāke |
| to dance | quile | head | ochana |
| to sleep | kapenai | foot | naca |
| to speak | chumake | feet | nacamala |
| to see | petāke | to eat | maskune |
| to sit down | pechique | to drink | cope |
| to come | nene | rice | caganturpa |
| to go | nae | maize | opa |
| the face | gwawkala | plantain | machee |
| hair | chagli | cocoa | okoba |
| ear | uwa | forest | chapur |
| eye | ibia | mountain | chapurmala |
| nose | an uchuu | fish | huguaw |
| mouth | kagya | little | icheguaw |
| tongue | quawpina | much | ichogi |
| teeth | nukala | wait a while | anaptaquell |
| beard | chica | night | mutikuti |
| neck | tukala | day | ibigine |
| arms | ankala | good | nugueti |
| hands | anchunkala | bad | istalga |
| fingers | cōō | it is late | pato chetogi |
| nails | cōō nu | come with me | ambag neni |
| body | anabgana | will you come | ambag betake |
| leg | thugwa | I | ani |
| gun (bow) | kinki | you | pēē |
| powder | kinki boo | he | aa |
| lead | kinkwaka | we | nanmala |
| canoe | ultumati | ye | pemala |
| calabash | noka | they | amala |
| wild hog | yanu-chapurri | rivulet | tee ana |
| sea | termala | dry season | yola |
| flint | akkwanucha | rainy season | tee gini |
| steel | chekar | old | cheleti |
| two canoes | ultumati wal- | young | nuchukwa |
| | bogwa | palanka or pole | ulchogwala and |
| stone | akkwa | | otigali |
| paddle | cammi | white woman | pundolachipugwa |
| entlass | echa | black woman | pundola chichiti |
| the river is deep | tee yegualgugwe | rum | inatilititi (any |
| the river is shal- | tee thathala | | liquor) |
| low | | 1 | quenchaqua |
| the river source | tee tokoo | 2 | pocoa |

| | | | |
|---------------------|--------------------|------------------|------------------|
| 3 | pagwa | a chingo has | ulgwen nonigi |
| 4 | pakegua | arrived | |
| 5 | aptali | a canoe has ar- | walguen ulnonigi |
| 6 | nerkwa | rived | |
| 7 | kugle | how is your son? | pemachi nugueti |
| 8 | pabagi | when will the | ingu ulak-te- |
| 9 | pakebagn | canoe come | yoguey nak- |
| 10 | ambe | from up the | walakari |
| 11 | ambegwargine | river? | |
| | kaka quench- | when will the | ulo chana ulno- |
| | aqua | canoe come | nige diba te |
| 12 | ambe kaka pocoa | from down the | yalakari |
| 13 | ambe kaka pagwa | river? | |
| 20 | tulaguena | my brother is in | angmechati wir- |
| 21 | tulaguena kaka | the bush hunt- | chanati |
| | quenchaqua | ing | |
| name | nukka | at what time | chana nang ma- |
| what's your name | igi pennukka | shall we go? | lowe |
| the sea shore | termankaka | at noon | ipe yolapugwe |
| the tide is rising | timureti nacqua- | at midnight | cabguena |
| | lomai | we will go be- | ipe yolukugwe |
| the tide is falling | timureti arreogali | fore noon | namalogue |
| where are you | piyalpenai | we will go be- | yocabguengutag- |
| going? | | fore midnight | we namalogue |
| whence come | piyal petanigi | after midday we | ipe agupinitele |
| you? | namäla | will go | namalogue |
| let us go | | priest | lele |
| let us go bathe | omamäla | Spaniards | Guaca |
| how do you do? | penuguëtigua | road | napanane |
| how are your | penuchugana | kettle | eysmeti |
| sons? | nugueti | the day after | alchuli |
| where did you | piya akari peta- | to-morrow | |
| come from? | nigi | ere yesterday | astogi |
| where did ye | piya akari peta- | clothes | mola |
| come from? | nimala | biscuit | meriki mato |
| whence did your | peyayamala piya | cocoa | chiagua |
| friends come | kartanigi | turtle | moroko and patti |
| from? | | pole | negloneka |
| when will you | kana petakowe | trunk | uloogwa |
| come? | | looking-glass | ispe, from the |
| come soon | quarrye petakowe | | Spanish espejo |
| give me fire | angacho cheeyalo | shirt | mola makalete |
| your hand | peyanchola | leaves to thatch | uruaga |
| your hands | peyankalmala | houses | |
| the chingo is | kuwalulnai | to sow | epige |
| ready | | beads | kingwagwa |
| - two canoes have | walapokwa ulno- | nose-rings | achu kinëti |
| arrived | nigi | cannon | kinkilitumati |

| | | | |
|--------------------------------------|--------------------------------------|----------------------------|---------------------------|
| have you a mother ? | nanna mai | they went into the bush | yala nannie |
| have you a father ? | papa mai | they went up the river | tiguala nannie |
| do you know ? | pewishi | 30 | tulaguena kaka ambegi |
| when will you come ? | ikiptaniki | 40 | tula pogoa |
| when will you go ? | ikip anai, chana ina or ipa-pigwanai | 100 | tula tale |
| I will go to-morrow morning | pane nai | will you buy ? | pepaque |
| I will go at noon | tata yorke nai | what do you want to buy ? | ipiani ampenuke |
| will you come with me ? | petaniki yo | give me fire | so pincha |
| when are you going to hunt deer ? | piyanai china cogue purkwisa | what do you think ? | iki pinchachu mai |
| when is your brother going ? | ipequenati chana penai | to drink water | tee cope |
| money | mania | to drink liquor | chicha cope |
| much money | mani toga | sloop | ulo choarra quen-chaua |
| how many reals ? | iki mani | schooner | ulo choarra pogoa |
| one real | maniguena | brig | ulo tumati choarra datali |
| two reals | manipowga | ship | ulo choarra pagua |
| five reals | maniptali | steamer | so ulo |
| a dollar | tunguena | mast | choarra |
| two dollars | tumpowga | wind | proa or puruaga |
| six dollars | tunguerkwa | fair wind | proa nugueti |
| seven dollars | tungkukili | foul wind | proa isterga |
| eight dollars | tumpakeguaka | rough sea | teemala uruetoga |
| yesterday a vessel sailed from hence | psai ulotumati itikine nati | there are rocks in the sea | teemala akkwa mai |
| yesterday a vessel arrived here | psai itikine ulo noni | there is very little wind | proa pipigwa |
| a vessel will arrive to-day | eysmiqua ulo noni | there is very much wind | proa toga |
| to-morrow a vessel ought to come in | pane ulo itikine noni | south wind | yala puruaga |
| * ten days ago a vessel came here | ipambegiwusa ulo itikine nonni | north wind | makati puruaga |
| five foreigners went on shore | meriki aptali itikine napa nannie | E. | ti |
| | | W. or vendaval | chagri puruaga |
| | | what wind is blowing ? | iki proa pole |
| | | loose the sail | wur mola parmite |
| | | take in ditto | wurmola he |
| | | to belay a rope | tupa eytine |
| | | a broken plank | urkwa marali |

A part of the above Vocabulary, which I forwarded from the Isthmus, appeared in the Journal of the Royal Geographical Society, for November, 1851.

* This and the three following sentences refer to Messrs. Gisborne & Forde's landing with three sailors, and going into the bush.

II.

DARIEN SHIP NAVIGATION.

ENGINEER'S REPORT.

IN December, 1851, our attention was called by Dr. Cullen to the Isthmus of Darien, when from his statements and other information we were led to believe a favorable line of country existed for the formation of an inter-oceanic navigation.

Mr. Lionel Gisborne with his assistant Mr. H. C. Forde, Civil Engineers, were despatched by us in April last to undertake the examination of the Isthmus; and hereto appended is the report of their investigations.

The New Grenadian Government has since granted us a concession of land and privileges necessary for the construction of an inter-oceanic communication.

In submitting this report to the public, we confidently recommend the adoption of that navigation which will, without locks, at all times permit the passage of the largest vessels.

CHARLES FOX,
JOHN HENDERSON,
THOMAS BRASSEY.

London, Sept. 10, 1852.

TO MESSRS. FOX, HENDERSON AND BRASSEY.

GENTLEMEN,—Having made arrangements with Sir Charles Fox to ascertain the practicability of an inter-oceanic navigation for the largest ships, at all times of the tide, across the Isthmus of Darien, between Port Escoces on the Atlantic and San Miguel on the Pacific, and having made such preparations as I could in this country, I sailed with my assistant, Mr. Henry C. Forde, on the 2nd of April

last, from Southampton to Cartagena, where we arrived on the 1st of May. Here we completed our arrangements, chartered the schooner *Veloz*, sailed for Port Escoces on the 12th of June, and anchored in that port on the 15th.

At Cartagena we obtained information which fully confirmed what we had been led to expect from the little we gathered in England;—that no strangers had been allowed to visit the interior since the Buccaneers assisted the natives in repelling the Spaniards nearly two hundred years ago; that it was in vain to think of obtaining from these jealous savages permission to enter their territory, and that to do so without their permission was hazardous in the extreme. Yet as it was generally supposed that the summit level between the two oceans was near the Atlantic coast, and it was, therefore, important to ascertain whether that was the fact, we determined to make the attempt. From the schooner the Cordilleras appeared to run in an unbroken range. We landed on the morning of the 17th of June, and crossed this range without any obstacle, ascertaining the lowest point visible from the seaboard to be 276 feet high.

Beyond this point we followed a small stream, which led us to a larger river flowing from the S.W., in a semicircular sweep towards the north. A flat plain extended to the S.W. in the direction of the Gulf of San Miguel, as far as the eye could reach; looking over the tops of the trees from a bluff about 100 feet high, which we ascended for the purpose, we obtained an uninterrupted view for at least six miles in that direction. The ranges of hills seen are shewn in red in Map No. 1.

We followed the course of this river to the north until dark. Early on the following morning two Indians in a canoe came in sight, who, upon perceiving us, instantly landed and fled to the woods. Proceeding on our journey we met, a few hours afterwards, a woman and two children (one an Albino), from whom we were unable to derive any information. We had scarcely passed her when a canoe suddenly appeared with five well-armed Indians in it, who

made us understand that we were to follow them, which we thought it prudent to do.

They led us, fortunately, along the course of the river, which gradually assumed a more easterly direction, winding among the hills that overlapped each other, until we reached a village at its mouth in Caledonia Bay. We were thus singularly assisted in our object by the discovery of a passage through the range of the Cordilleras, which had been heretofore supposed to be unbroken. Here an Indian, who spoke a little English, and seemed a principal man in his tribe, questioned us as to our object in entering their territory. Thereupon a meeting was held of the chief men, who detained us as prisoners. After several hours, and with great difficulty, we prevailed on them to allow us to return to our vessel, on the condition, however, that we should set sail instantly, and upon the understanding that if we were again caught in the interior, more summary measures would be adopted. Five or six Indians accompanied us to Port Escoces, about five miles off (where our vessel was lying), and they remained until the afternoon, when we were well clear of the coast.

Our great object had, however, been obtained in finding that the Cordilleras, which appeared from the sea a continuous range, had an intervening valley, and that the summit between the two oceans must be in the centre of the Isthmus, if not nearer the Pacific coast.

It had also been ascertained that Port Escoces, though rather small for the terminus of a great ship navigation, would make an excellent harbour of refuge, and that Caledonian Bay, as far as I had an opportunity to examine it, was most admirably calculated to serve the purpose of a harbour to the contemplated undertaking.

We now sailed for Navy Bay, and thence crossed the Isthmus to Panama, where we arrived on the 25th of June. Here we hired a small schooner of twelve tons burden, sailed on the 27th for the Gulf of San Miguel, and arrived in the night of the 29th at Bocca Chica,—the entrance of

Darien harbour. We proceeded on the following day to the examination of the Savannah river. At its mouth we found it two miles wide, narrowing for seven miles above to a width of half a mile, and skirted by hills from two to three hundred feet high, running within a mile or two of its banks. The depth of the river varies from nine to six fathoms at low water; and soundings gave us a soft muddy bottom. From this point to the junction with the river Lara, the depth diminishes till the bottom becomes level with the mid-tide. The tide rises for five miles further up the Savannah to a fall of about two feet over stratum of rock crossing the stream diagonally N.E. by E. at a dip of 60° . The point marked I. on the accompanying Map shews how far we are able to ascend in a canoe. The same class of rock appears both at the bottom and the sides. The course of the Savannah beyond tidal influence is tortuous, the width of water way being sixty feet at I.

On the morning of the 2nd of July we began our land journey to the N.E. in the direction of Caledonia Bay. For the first two miles the country was level and less overgrown than on the Atlantic side, which made our progress comparatively rapid.

We then crossed a range of hills which we ascertained to be 100 feet high. After passing a valley in which was the confluence of two small streams, we crossed a second range 130 feet high, forming the summit between the Savannah and Caledonia rivers; at the foot a stream flowed nearly due east. We followed it for two miles, which led us to a larger one, the course of which we traced to the point marked D on the map. At this point a clear view to the N.E. in the direction of the point marked E, towards Caledonia Bay, shewed a flat plain with no intervening hills. The points D and E being only six miles apart, our view from D toward E, and our still more commanding view, for at least six miles from an elevation of 100 feet at E in the direction of D, overlapped and were perfectly conclusive with regard to the few miles seen and not actually walked

over. We therefore accepted the admonition of a foot-path and a bridge formed by the trunk of a tree placed across the river at this point, that we were again in the territory of the Indians into whose hands we had fallen at Caledonia Bay, and that our object being accomplished, it was unwise to incur further risk from the Indians by walking over these six miles, thinking it best for the success of the undertaking to retrace our steps at once.

On mapping our route, I found that the point I. was too high up the Savannah River for the shortest junction between it and Caledonia. We therefore ascended the River Lara, which ran in a more easterly direction; the tide carried us up six miles, the width narrowing from 300 feet to 30 feet; some falls of a few inches each are caused by rock of the same character as that of the Savannah; its course is very tortuous; for the five miles I examined beyond tidal action the bottom was uniformly rock, and it became an insignificant stream. After mapping the direction, I feel confident that its source is the confluence of the small streams found in the valley between the two ranges of hills previously mentioned.

The gravel banks in the Savannah and Lara Rivers are composed of the detritus of igneous and stratified rock. The latter is the same as that forming the falls on both rivers; its dip being from 60° to near 90° , and its strike varying from N.E. to S.E.

The general character of the country is that of a flat plain, subject to inundation at high tides for a considerable distance out, and covered with mangrove wood, whose high interlacing roots growing out of soft mud, render walking impossible. Beyond tidal influence the banks rise five or ten feet above ordinary water-level, and are covered with the finest timber I have seen on the Isthmus—cedar, mahogany, ebony, *lignum vitæ*, cuipa, palms, and other trees.

On the 9th July we returned to San Miguel. This bay is naturally divided, by a promontory and a chain of islands,

into a roadstead and a magnificent harbour. Captain Kellett's unpublished chart, supplied by the Admiralty, shews only a part of the former. I have made a survey of the remainder; and the general features are represented on the accompanying maps, as also those of Darien Harbour. I did not examine Bocca Grande, as I understood from the natives that the navigation through it is rendered dangerous by rocks; and as Bocca Chica, on account of its depth and position, is far more advantageous.

I do not think it possible to exaggerate the merits of this part of the Isthmus as the terminus of a great ship navigation; it requires but an examination of the Map to be convinced of this fact,

We returned to Navy Bay, and sailed for England on the 24th July, where we arrived on the 17th inst.

On Map No. 1, I have shewn in red colour the topographical facts which have been ascertained by personal investigation, with sections of the portions traversed. From this, it will be collected that the harbours of San Miguel and Caledonia are both excellent as the termini for a ship navigation on the largest scale, with Port Escoces as a harbour of refuge, should circumstances occur to render its use necessary; that the Savannah river has six fathoms or upwards in depth at low water, for a distance of seven miles from its mouth, the effect of the tide reaching on the Lara tributary eleven miles above this, or eighteen miles from Darien Harbour, leaving a distance of thirty miles to Caledonia Bay, *which is the actual breadth of the Isthmus between the tidal effect of the two oceans*; that the summit level is ascertained to be 150 feet, and is formed by a narrow range of hills, having a gradually rising plain at their foot at each side. There is every reason to believe that a more detailed examination of this division of waters will result in a considerably lower summit being found; but this, under the circumstances of the section, is not such an important point as might at first be supposed; the narrowness of the ridge making the cubic quantity through it very

small compared to the excavation through the plains, so that should the hills depress into the actual level of the plains, the estimate will not be materially affected. The bulk of the work to be done is in the plains themselves, and the cost will be proportionate to the cross section adopted, or, in other words, the depth and breadth of the navigation required. The question, therefore, resolves itself into what are the necessities of commerce as an inter-oceanic water communication.

I do not consider it necessary to enter into the merits of this question. My instructions are, to design a navigation capable of passing with security at all times the largest vessels navigating the two oceans, not with a view to a local coasting trade, but for the accommodation of the whole maritime world.

There are two methods of accomplishing this object:—

1st. To make a cut of sufficient capacity to form an uninterrupted navigation (without locks) from sea to sea.

2nd. A navigation with locks on a scale suitable to the object in view.

There can be no doubt that the carrying out of the first proposition will comply in the fullest sense with the requirements of all classes of vessels, and, when completed, will best supply the want of a natural connexion between the oceans. Its execution offers no engineering difficulties, and no chance of future failure; it is simply a question of cubic quantity of excavation dependent on the dimensions of the cross section.

Many large Merchantmen and men-of-war draw from 24 to 28 feet of water; and oceanic steamers measure 350 feet over all, with a breadth of 70 to 74 feet across the paddle-boxes. Ship-building is not at a stand; on the contrary, the size of vessels is rapidly on the increase. In such an undertaking it is therefore reasonable to forestall progress by a timely concession to it. I propose to make a cut of 30 feet deep at low tide, 140 feet broad at bottom, and

160 feet at low water's surface. Such a cut, carried from sea to sea, is not larger than the trade of the world requires, and will form a permanent, safe, and rapid mode of transit.

On Plan No. 2, the direction of the navigation is marked by a red line, and on the section, the depth of cutting required is shewn in red colour.

On the Pacific the tide rises twenty-three feet, and on the Atlantic it is scarcely appreciable. Mid-tide is on a level, or nearly so, in the two oceans, so that there will be a current both ways dependent on the ebb and flow of the Pacific. This current will not exceed three miles an hour, and will act most beneficially, not only as a scour to prevent deposit, but as an assistance in the transit of vessels. It will secure the passage being effected in one tide, and prevent the passing of vessels going different ways, as the direction of the trade will be influenced by the ebb or flow of the Pacific tide. The material to be excavated through is chiefly rock (not expensive to quarry), so that this current will not wear away the banks, nor will the wash of passing steamers cause injury; it also affords security against any interruption to the navigation from slips, and reduces the cost of maintenance to a nominal sum. This rock is a stratified shale, with thinnish beds, easy to get, though sound, and will form an admirable side-lining to the navigation, dispensing with the necessity of any artificial protection. The fact of its existence is one of the most favourable features of the undertaking as regards permanence and certainty of success.

I estimate the cost of this design at £12,000,000. It must be remembered, that no project has ever been before the public which embraces any thing like the objects attained by such an uninterrupted navigation. All other propositions have but local importance, and look to their profits from local trade; this one is adapted to every ship afloat, and seeks a return from the trade of every country. Its completion will make a change in the carrying com-

merce of every Pacific port; and, as a railway makes its own traffic, so will this work most certainly greatly increase the commerce between the distantly separated countries which steam-power is only now beginning to reach.

This is the design which, after mature consideration, I confidently recommend for adoption; and it is almost with regret that I feel it my duty to submit any other, so sure am I that it is the only one which will satisfy the requirements of commerce.

My second proposition necessitates two levels, joined by a series of locks.

I adhere to the cross section of cut recommended in the previous design, as well as the fact of the navigation being open to the largest vessels at all times of the tide.

A tidal canal, supplied on the upper level at high water, would be a very imperfect navigation, and one-third more expensive than the design I am about to submit. I estimate the cost at about £7,000,000. It would involve all the disadvantages of a canal, and offer many obstacles to be guarded against, such as the arrangements for draining the country on each side, without the risk of strong currents and shoals formed by deposit, and increase the time of transit considerably, by the small speed attainable by steamers in such a class of navigation. I cannot recommend it for the purposes intended.

It has been before mentioned, that the Savannah and Caledonia rivers run in two extensive plains. They are uninhabited, and the land is uncultivated. It grows, however, fine timber, which, if means of transit were at hand, would be of considerable value. During the dry season, neither of these rivers could, near their source, supply the water required at a summit-level of a navigation on the scale contemplated; during the wet season, again, they discharge a large volume of water, which, in an ordinary canal, would cause trouble and expense to regulate, and prevent accumulations of deposit. Under these circumstances, I propose placing an embankment across both

these rivers at the points marked in red on Map No. 3, making the embankments long enough and high enough to raise the water at their back 90 feet above low tide in the Pacific. This will flood both plains up to the range of hills which forms the boundary of their catchwater basins. Through the summit a cut is to be made of the same cross section recommended in Design No. 1, but with 40 feet depth of water, so as to allow 10 feet to be drawn off the lake for lockage, or a rise of 10 feet to catch flood-waters, and prevent too rapid a current in the tidal entrances to the harbours. All the valuable timber in the lake must be cut previous to the water being let in, so that an easy means will be afforded to convey it to the harbours for shipment. From Caledonia Bay to the embankment, a cut will have to be made of the cross section adopted in the other design. The Savannah is navigable up to the point where the embankment is to cross.

The rise of 90 feet will have to be overcome by locks placed in the side of one of the ranges of hills against which the embankments terminate, and which are composed of rock; weirs will also be provided to discharge surplus waters.

It is a serious undertaking to raise a large vessel 90 feet, without much loss of time.

I am fully prepared to meet this difficulty, and propose that the locks should be 400 feet long from mitre to mitre, and 90 feet wide between the gate quoins. Each lock to have a lift of 30 feet, to be overcome by wrought iron gates. The large supply at the summit level does away with the usual objection to a high lift wasting water. There will be no difficulty in constructing the locks and gates of the dimensions proposed, stone, lime, and sand of excellent quality, are obtainable in more than one place on the line of country to be traversed.

Three locks will thus be required in each embankment, and I have estimated for two sets at each end; the second set to be 300 feet long and 50 feet wide, with 22 feet of

water on their cills. Thus four vessels can be passed into the lake at the same time, and the larger locks only used for those adapted to their size.

For a navigation requiring the use of locks, I can submit this design with confidence. It possesses the facilities of deep still water lake navigation, without the disadvantages attendant on the use of a canal. The concentration of lockage in two places will save time. Great facility is also offered in the execution of the work by its not being spread over a large area, and only a small portion of it below tidal level. The estimated cost is £4,500,000, it is only about one third of that set down for an uninterrupted cut from sea to sea, but the disadvantages are very great; locks are decidedly objectionable in an undertaking of this magnitude and mercantile value. The best studied plans carried out in the most perfect manner, cannot guard against accident or neglect, which may stop the whole transit for months. Delay and risk there must be when such large machinery is worked; and there is no doubt shipowners would sooner pay a higher toll to pass directly from sea to sea, than run the risk and incur the delay of lock navigation.

This question is not one on which a hasty opinion should be formed, nor must the decision be biassed by the disparity in the cost of the two measures. The real point is, which is of the greatest value to the mercantile community? A far-seeing thinker cannot doubt that the level cut is the only one which will comply with the requirements of the world.

In framing the estimates I have calculated wholly on imported labour, making a liberal allowance for the diminution of work to be expected in a tropical climate and the extra wages necessary to induce parties to emigrate. This portion of the Isthmus of Darien is without doubt in one of the most healthy districts. Neither Mr. Forde nor I suffered in the least from the climate until our return to Panama, notwithstanding we were often for days together in the same

wet clothes without a blanket to cover us at night and living on bad provisions.

The reason of this comparative salubrity is the absence of swamps or overflowings of the river banks out of the range of the tide, and the general dry character of the surrounding district.

I have purposely abstained from entering into any detail of the works contemplated, or the arrangements for carrying them out. My object has been to give a concise view of the facilities of the Darien route, the facts elicited by the examination of the country by Mr. Forde and myself, and the best means of carrying out a project which has for centuries occupied the attention of Governments and mercantile men without much advance towards its completion; I cannot conclude, however, without again earnestly recommending for adoption that design *which will, without locks, at all times, permit the passage of the largest vessels.*

I remain, Gentlemen,

Your obedient servant,

LIONEL GISBORNE, C.E.

41, Craven-street, Strand,
London, August, 28th, 1852.

III.

THE ATLANTIC AND PACIFIC JUNCTION
COMPANY.

(NAVIGATION THROUGH THE ISTHMUS OF DARIEN
WITHOUT LOCKS.)

(Provisionally Registered.)

*To be Incorporated by Royal Charter or Act of Parliament, limiting
the liability of the Shareholders.*

Capital, Fifteen Million Pounds Sterling, in 150,000
Shares of £100 each.

DEPOSIT 10s. PER SHARE, WITHOUT FURTHER LIABILITY.

Being the Amount limited by the Act 7th & 8th Vic., cap. 110.

Provisional Directors.

Chairman.—THE RIGHT HONOURABLE LORD WHARNCLIFFE.

Deputy-Chairman.—JOHN PEMBERTON HEYWOOD, Esq.

J. S. BROWNRIGG, Esq., Governor of the Australian Agricultural
Company.

CHARLES BROWNELL, Esq., Liverpool.

THOMAS R. CRAMPTON, Esq., 2, Kensington Square.

EDWARD CROPPER, Esq., Liverpool.

J. C. EWART, Esq., Liverpool.

G. D'OLIER GOWAN, Esq., Copthall Court.

W. J. HAMILTON, Esq., Chesham Place.

LEWIS H. HASLEWOOD, Esq., Highgate.

T. H. HOPE, Esq., Piccadilly.

HUGH HORNBY, Esq., Chairman of the Chamber of Commerce of
Liverpool.

ADMIRAL C. R. MOORSOM, R.N., Highfield, Birmingham.

CAPTAIN MACKINNON, R.N., 4, Hyde Park Place.

A. MONTOYA, Esq., Consul General for New Grenada.

FRANCISCO DE RIVEIRO, Minister Plenipotentiary from the Government of Peru in Paris.

EZEQUIEL ROGAS, Minister of New Grenada.

MELVIL WILSON, Esq., Albermarle Street.

ALEXANDER WILSON, Esq., 34, Bryanstone Square, Director of the Bank of Australasia.

WITH POWER TO ADD TO THEIR NUMBER.

Bankers.

Messrs. HEYWOOD, KENNARDS, and Co.

Solicitors.

Messrs. J. C. and H. FRESHFIELD.

Official Auditor.

J. E. COLEMAN, Esq.

Secretary.

DR. BLACK.

Engineer in Chief.

LIONEL GIBBORNE, C.E.

Temporary Offices—36, MOORGATE STREET.

The object of this Company is to unite the Atlantic and Pacific Oceans by an open navigation across the Isthmus of Darien.

The vast importance of this design has long made it a subject of anxious attention to all civilised nations. So early as the year 1695, when commerce and engineering science were comparatively in their infancy, Mr. Paterson, the founder of the Bank of England, obtained an act of Parliament, under which the large sum of £500,000 was subscribed for this purpose; but this design was frustrated by the influence of the new East India Company.

It was believed that the great elevation of the Cordilleras presented an insurmountable barrier to the opening of a passage by sea, and the supposed difference of the level of the waters in the two Oceans formed a further imaginary obstacle. The period having arrived when the spread of commerce and the flow of emigration from the over-populated countries of Europe to the western shores

of America, Australasia and China, demand a passage more direct than that by the Cape of Good Hope or Cape Horn, various projects were formed for uniting the two oceans by roads, railways, and canals, and the routes by Nicaragua in the north, Chagres in the centre, and Atrato in the south of the Isthmus, were selected by different parties for these purposes.

All these projects, though intended in some measure to meet the exigency, were open to the manifest objection that they fell short of supplying a continuous channel from sea to sea, for vessels of all dimensions, by which alone trans-shipment could be obviated, and the objects in view adequately obtained.

That the Isthmus of Darien admitted of a communication of this nature, was first urged upon the consideration of Sir Charles Fox, by Dr. Cullen. After much inquiry and investigation into the existing charts and surveys of the country, so many reasons for the conclusions advanced were discovered, that, after communications with the governments of England and the United States, who cordially responded to the call for co-operation in a cause of such vast importance to the interests of the world, Sir Charles Fox resolved on dispatching engineers to the spot for the purpose of examining the country and reporting on the feasibility of the undertaking.

Arrangements were accordingly made with Mr. Lionel Gisborne, a civil engineer of great experience in the execution of navigations, to proceed to the locality indicated by Dr. Cullen, which lay in the narrowest portion of the Isthmus between Chagres and the river Atrato, a part of the country which is believed not to have been traversed by any European for two centuries.

Sir Charles Fox, Mr. John Henderson, Mr. Thomas Brassey, and Dr. Cullen, applied to the Congress of New Grenada for a concession of territory, between the point of Mosquitos and the western mouth of the Atrato, which was complied with by a grant of about 200,000 acres, for

a canal, a railway, or a road, conditional on the sum of £24,000 being deposited within twelve months, to be returned without interest, on the opening of the communication, and was accompanied by assurances of cordial co-operation on the part of the government.

Mr. Gisborne, accompanied by his assistant, Mr. Henry C. Forde, arrived at the Bay of Caledonia, in the month of May, 1852, and after surveying the coast on both sides and the intervening country, ascertained beyond doubt, that between the Bay of Caledonia on the Atlantic, and the Gulf of Saint Miguel on the Pacific, there is a distance of only thirty miles between deep water on either side, consisting of land generally level, which in no case is of considerable elevation, or presents greater obstacles than have been surmounted on railways and other engineering works; and he returned to England, reporting his opinion that three modes existed of effecting the object, the most costly, but most effectual of which was, to construct an open channel between the two oceans, as originally proposed, which can be executed in five years from the date of its commencement, at a cost not exceeding Twelve Millions.

The practicability of forming an inter-oceanic navigation without locks, having been thus ascertained, it is now proposed to form a Company to carry out this great work in co-operation with the Governments of the United States and the European powers interested in it, on such terms as may make the undertaking permanent, secure, and profitable.

As a mercantile investment, there is no doubt that this inter-oceanic navigation is capable of being made one of great pecuniary advantage. No sufficiently authentic account exists of the number of vessels or the amount of tonnage which passes round Cape Horn and the Cape of Good Hope to the Western Coast of America, Australasia, and China; but sufficient data have been obtained to prove that the tonnage is so great as to make a small toll on

vessels passing through this channel, a source of very large return on the capital required, while a toll of considerable amount would be a very small burthen in comparison with the vast saving of expense to sailing vessels and steam boats in time and money, by the use of so short and desirable a passage.

Upon these points it is not necessary here further to dilate. It is not intended to embark in the execution of the work, without the most satisfactory assurances based on the fullest enquiry and investigations into the prospects of the undertaking in every respect.

For the present purpose it is proposed to raise a nominal capital of Fifteen Millions sterling, in shares of £100 each, of which ten shillings per share will be paid on allotment, forming a fund of £75,000. This sum will suffice to defray the preliminary expenses incurred, to pay the deposit required by the terms of the concession, and provide for the expenses of prosecuting such further surveys and investigations, and also negotiations with the governments both at home and abroad, for grants, or guarantees, or co-operation in such other form as may be deemed necessary to success.

The sum of Twelve Millions sterling is believed upon the authority of the subjoined Report of Mr. Gisborne, to be amply sufficient for the execution of the works on the largest scale, and the capital has been fixed at £15,000,000 in order to provide a sufficient fund for payment of interest to the Shareholders during the progress of the undertaking, in the event of no better arrangement being made for obtaining it.

A Charter of Incorporation or Act of Parliament, conveying limitation of liability, is considered essential; and parties taking shares will not be liable to any further call beyond the deposit, until a constitution on one or other of these bases has been obtained, or without the sanction of a General Meeting, *and any Shareholder desirous of withdrawing at any time will be permitted to do so on sending*

in his scrip for cancellation, and forfeiting the deposit paid on his Shares.

In order to meet the wishes of those foreign governments whose co-operation will be sought in securing the neutrality of this navigation, pursuant to powers contained in the concession, and who may also desire pecuniary participation in this enterprise, it is part of the proposed arrangements to take measures for ascertaining, at as early a period as possible, the extent to which such nations wish to become interested, and the form in which they propose to do so, and to give effect to their views in these respects, it may ultimately become necessary to reduce the Shares to a smaller nominal amount, so as to admit these parties into a participation in the capital, or to extend it with that object.

It is understood that the Concessionaires (in lieu of any other remuneration), are to have a tenth part of the nett annual profits, after payment of a dividend of five per cent. on the capital.

The preliminary expenses hitherto incurred do not exceed £5000.

Application for shares may be addressed to the Directors, according to the subjoined Form, and Prospectuses and Forms of Letters of Application may be had at the Company's offices, and of Mr. EDWARD HASLEWOOD, 15 Angel-court, London.

TO MESSRS. FOX, HENDERSON, AND BRASSEY.

GENTLEMEN,

According to my instructions, I proceeded in April last, with my assistant, Mr. H. C. Forde, to the Isthmus of Darien, to ascertain whether the country would admit of the construction of an inter-oceanic navigation 150 feet wide, 30 feet deep, and without locks, as proposed by Sir Charles Fox.

The accompanying map and section are compiled from personal observation. The following are the leading natural features of the locality :

The distance between the tidal influences of the two seas is thirty miles.

The mean water of the two oceans is nearly level. On the Pacific the tide rises from twenty-two to twenty-five feet (spring and neap); on the Atlantic from fourteen to eighteen inches.

Excellent natural harbours exist at each end of the proposed navigation, that at St. Miguel, on the Pacific, being without doubt one of the finest in the world, as regards its extent, depth of water, freedom from shoals, land-locked character, and ease of access. The Caledonia and Savannah rivers run through two extensive plains, the separating ridge being 150 feet over the mean water of the oceans. These plains, though flat, are sufficiently elevated to be dry, and consequently, free from those unhealthy influences which affect many parts of the Isthmus of Panama.

The tide flows up the river Savannah for eighteen miles. For seven miles above its mouth there is six fathom depth at low water, with a breadth of nearly half a mile. The material to be excavated in forming the channel consists of alluvial deposit, clay, gravel, and rock, the latter is a dark sandstone, very regular in the stratification, and lying most advantageously for removal.

Having ascertained these facts, it is recommended to form a navigation between the two oceans, which will, without locks, at all times permit the passage of the largest vessels, having 150 feet breadth at mid-water, and thirty feet depth at low tide. In consequence of the Pacific rising above, and falling below, the level of the Atlantic, there will, during every tide, be a current flowing each way, whose greatest velocity will not exceed three miles an hour. This is a most important point, the direction of the trade will naturally follow the flow of the tide, so that the meeting of vessels will be obviated, and the navigation kept free from deposit.

In calculating the cost, nearly the whole of the material has been estimated as rock, and at prices 75 per cent. above the cost of the same class of work in England; allowance has been

made for imported labour, and a sufficient sum set down for preliminary arrangements :—

| | |
|---|--------------------|
| Cost of excavations, masonry, etc., for the completion of the navigation | £12,000,000 |
| Interest on capital during progress of work | 2,000,000 |
| Preliminary arrangements, importing labour, purchase of land, etc., etc. | 1,000,000 |
| Total | <u>£15,000,000</u> |

The capital appears large; but the return will be in proportion to the magnitude of the undertaking. This is not a question dependent on local trade; every maritime nation has an interest in its success, and the commerce of the world will yield the profits. Moreover, the vast supplies of gold now discovered, afford means which cannot be applied to more beneficial objects, than in extending the blessings of civilisation by thus facilitating the operations of commerce.

In such a case statistics are almost superfluous; it is safer to consult the history of the progress of commerce, and argue from it, than to calculate profits from the existing state of things. But even on this limited ground it can be shewn that the capital invested will meet with a good return, by charging only a little more than the amount saved in the insurance, without reference to all the other advantages which this route will offer. From the trade statistics, it appears, that in 1851 upwards of 3,000,000 tons of shipping, and 150,000 passengers would in that year have taken advantage of this navigation.

The question of engineering resolves itself into the removal of a large quantity of material, and the time necessary to do it in. Nature not only facilitates in a most remarkable manner the execution of the necessary works, but also provides an assistant motive power for the transit of shipping by the fortunate variation in the level of the tides causing a current to flow each way alternately. My own experience, and a thorough investigation of the question, led me to fix three miles an hour as the maximum rate at which this current would flow, and the facts and observations upon which I arrived at such an opinion have

since been submitted to the most scientific men of the day, who fully corroborate my conclusion.

The requirements of the age demand this inter-oceanic junction, and as every nation is interested in it, both politically and commercially, it is to be hoped that this undertaking will receive the cordial support of the civilised world.

I am, Gentlemen,
Your obedient Servant,
LIONEL GISBORNE, C.E.

41, Craven Street, Strand,
London, 7th December, 1852.

FORM OF APPLICATION FOR SHARES.

*To the Provisional Directors of the ATLANTIC AND PACIFIC JUNCTION
COMPANY.*

GENTLEMEN,

I request that you will allot to me
Shares of £100 each, in the above Company; and I hereby
undertake to accept the same, or any less number you may allot
me, and pay the Deposit of 10s. per Share thereon, and to sign
the Subscribers' Agreement when required.

Dated this day of

Name in full

Place of business

Residence

Business or Profession

Signature

Name, Residence,
Profession, and
Reference. }

OBJECTIONS AND THEIR ANSWERS.

"THE TIMES" AND SIR CHARLES FOX.

"A Company has been advertised for constructing an Atlantic and Pacific Junction Canal through the Isthmus of Darien, at a cost of £15,000,000 sterling. This route, it appears, has never been actually surveyed, but some superficial observations lately made have led to the assumption that, if the levels should prove such as they are supposed to be, a canal capable of passing the largest vessels without locks might be excavated for the sum specified. That the revenue to be derived from a ship-canal between the oceans would be such as to repay even a very heavy expenditure is a conclusion long since arrived at by those who have most thoroughly investigated the question, but whether an outlay of £15,000,000 for a work that must be subsidiary to the Nicaragua Canal, every foot of which has been the subject of the most precise estimates, and which can be built so as to admit large ocean steamers, such as the Northern Light, for less than £4,000,000, will be found profitable, is a point upon which there would seem little difficulty in forming an opinion. The shares of the proposed Company are to be of £100 each, with a deposit of 10s., and a conditional concession of the Line has been obtained from the government of New Granada, to whom the sum of £24,000 is to be paid within twelve months of its date."—*The Times of 8th Feb. 1853.*

THE ISTHMUS OF DARIEN.

To the Editor of the Times.

Sir,—I have seen with some regret, and I may say disappointment, the observations appearing in your City Article of this day on the subject of the proposed navigation across the Isthmus of Darien.

Any observations appearing to emanate from you are entitled to so much weight, that I need not say it behoves any one, writing under your authority, to be very cautious in the opinions he expresses, lest in doing so he should damage or retard objects of public utility, which it is your whole policy and system to encourage and support.

The article I refer to impugns the principle and prospects of the Darien undertaking substantially in three assumed positions, all based on a comparison with the proposed canal from St. Juan to the Gulf of Fonseca, known popularly as the Nicaragua Canal. The writer states, first, that the proposed navigation across the Isthmus of Darien must be subsidiary to the Nicaragua Canal. He states, secondly, that that canal can be executed, "so as to admit large ocean steamers, such as the Northern Light, for less than £4,000,000 sterling;" and he infers, thirdly, from these statements, that the navigation across the Isthmus of Darien would not pay, while he assumes that the Nicaragua Canal would be remunerative.

These positions, I venture to say, are in many respects based upon incorrect data; and I think I shall have no difficulty in satisfying you on that point.

The necessity of a communication by sea between the Atlantic and Pacific Oceans being strongly felt both in the United States and in this country, it was recently proposed to construct a canal, commencing at St. Juan, on the shore of the Atlantic, and proceeding through the Lake of Nicaragua, to the Gulf of Fonseca, on the Pacific. It was ascertained that this work could be executed, with a depth of water-way of about twelve feet, at an estimated cost of £4,000,000 sterling; but, on further considering the subject, it appeared that this depth, though sufficient for the coasting and local traffic, was not adequate to the more general demands of commerce; and it was, therefore, subsequently proposed to increase the depth to seventeen feet, which was found to involve an increase of the cost to upwards of £6,000,000 sterling. The sufficiency of the

depth thus increased was, however, considered so questionable, both by the English and American engineers, to whom the matter was referred, that it was proposed to extend it to twenty feet; but this alteration raised the estimate to about £10,000,000 sterling. In the policy of the original proposition, various capitalists and individuals of great eminence in this country and in the United States concurred, upon the principle that the communication was expedient if it could be obtained at commensurate cost; but further deliberation, and especially the increase of expense attendant on increased depth, threw great doubt on the policy of the measure, especially as twenty feet was still greatly below the requirements of commerce, which nothing short of a depth of thirty feet could satisfy, the draught of vessels of the largest class at present being twenty-eight feet. Moreover, it appeared that in this work there would not be less, in the whole, than upwards of 100 miles of canalised river, besides much necessary expenditure in the lake of a very serious character. The passage was 195 miles in length; there were twenty-eight locks in its course; the period of transit was calculated at about six days; the country was very unhealthy; and the annual cost of maintaining the canal very great. Under any circumstances, the canal could not be constructed to carry ships of all sizes, and at best, therefore, it constituted only a partial and imperfect work. Minor drawbacks connected with the position of the canal were felt, which it is not necessary here to notice.

It was in this state of the inquiry that my attention was drawn to the subject, accompanied by a suggestion, that a means existed of opening the communication between the two oceans, which would accommodate the whole present and future traffic of the world, at a cost not materially, if at all, exceeding the proposed imperfect and incomplete measure. It appeared to me, that an object so vast was of importance sufficient to justify some expense and labour, and I resolved on despatching engineers to the spot. Mr.

Gisborne accordingly proceeded thither with his assistant, Mr. Ford; and, though it is true, in some sense, as the writer states, that "the land has not been actually surveyed," he examined the locality, he fathomed the water on both sides, and went over the ground, so at least as to satisfy himself of the height of the summit level and the nature of the soil. Mr. Gisborne's qualifications for such an investigation are well known, from his long experience under government in canal and other works, and his reputation is staked upon the correctness of his statements. He reported (and his report is published) to the effect, that an open navigation, only 30 miles in length of 30 feet depth and 150 feet wide, terminating in a good harbour on each side, affording passage in one tide for vessels, not only of the largest modern construction, but admitting of the increase now in contemplation, can be constructed at a cost not exceeding, on a high estimate, £12,000,000 sterling.

That the conclusion thus arrived at is not as absolutely certain, as if "every foot of the land had been the subject of precise estimate," as the writer assumes of the Nicaragua route, I freely admit; but I think you will agree with me, that the information obtained affords a very strong and cogent reason for concluding that the proposed selection of the Nicaragua route was a mistake, and that attention ought to be directed to this portion of the Isthmus.

It is obvious that, if a means exist of opening a passage for the whole commerce of the world, navigable at all times, it must be greatly preferable to a close canal, which can accommodate ships only of a certain tonnage. It is further obvious, that if that passage, once opened, can be maintained without cost, if it admits of transit in six hours instead of as many days, if it is free from the impediment of locks and canal navigation, and enjoys a good harbour at each terminus, it must be in principle greatly preferable. But if all this can be effected at little more than the cost of the proposed lesser work, with a depth of thirty feet instead of twenty, I think you will agree with me, that it will

never, as the writer of the article assumes, be subsidiary to the Nicaragua route; and even that, as regards this latter project, there is no fear that English or American capitalists will ever enter on a work so inherently imperfect and inadequate. Moreover, if the one which can only accommodate a portion of the traffic will pay, as assumed, it is clear that the other, which will accommodate the whole, must do so in a much higher degree.

You will observe that, for the present, all the contemplated proceedings of the Company proposed to be established are preliminary only. It is not suggested that it shall enter into costly measures without mature consideration and adequate support; but I venture to predict, that the result of further proceedings will be to confirm the conclusion already arrived at; and I am sure that, on the result, no one more than yourself will be rejoiced to find that English capital has not been embarked in an undertaking so unsatisfactory as the Nicaragua Canal, when there exist the means of opening out a passage for the traffic of the world, without let or hindrance, through a way prepared by nature for an operation so entirely effective, and so completely within the power and skill of the human race, already evinced, in a much higher degree, and in works physically much more difficult.

I have written this letter in great haste, and must apologise if it betrays intrinsic evidence of this fact, while I must further express my regret at having been thus compelled, contrary to my wishes, to enter upon this comparison.

I am, Sir, your obedient humble servant,

CHARLES FOX.

8, New-st., Spring-gardens, Feb. 8.

From the Times of 10th Feb. 1853.

A letter published to-day from Sir Charles Fox on the projected Darien Canal calls only for limited remark, as its

allegations are inaccurate. Instead of the Nicaragua Canal being intended to run from San Juan del Norte to the Gulf of Fonseca, its Pacific terminus will be at Brito Bay. Instead of the estimate of its cost, even at 20 feet depth, being 10,000,000*l.*, it is believed to be less than 7,000,000*l.* (including a most unusual addition for contingencies). Instead of the draught of any considerable number of modern vessels being 28 feet, that of La Plata, the largest of the West India steamers, when she arrives at Southampton, before baggage and cargo have been landed, is only between 18 and 19 feet. Instead of the work involving 100 miles of canalised river, the surveys of Colonel Childs show only 47 miles. Instead of the country being very unhealthy, it has been demonstrated to be one of the most favorable districts within the tropics. Instead of the transit occupying six days, it is calculated to occupy between two and three days, about 700 miles being at the same time saved in the distance to California beyond what would be saved by a canal at Darien; and, finally, instead of there being "no fear that American capitalists will enter upon such a work" as the Nicaragua Canal, the necessity of hastening every political negotiation that would enable it to be commenced formed one of the prominent topics in the Message of President Fillmore last December, months after the whole details of the Darien scheme had been known and discussed in the United States. It is useless, moreover, to enter here upon arguments which can never have any satisfactory termination. During the past century, whenever the junction of the oceans has been recommended, the public have always been deterred from its accomplishment by the perplexities created from the advocates of rival routes contending each that his own scheme was perfect, and that all the others would prove ruinous or impracticable. The question, therefore, is never likely to be settled by theoretical disquisitions. Happily the time is arrived when the undertaking must be carried out somewhere; and inasmuch as the Americans are now every month crossing the isthmus

by thousands, we may rely that the selection of the best line will soon be decided from the test of popular observation and experience. At that period the public—remembering that the New York Company, when they obtained their concession for the Nicaragua Canal, were willing to share it on equitable terms with this country—will be in a condition to form an opinion whether the general interests of the world were best understood by those who would have urged English capitalists to accept the invitation, or by those who have endeavoured to arouse them to furnish a separate subscription for 15,000,000*l.* for Darien. Meanwhile it will not be irrational, at all events until the route for which the sum is contemplated has been actually crossed and surveyed, to decline entering into any controversy as to its comparative merits. If the public can be persuaded that the Nicaragua Canal is not likely to be made, or that, being made, the Darien Canal will not be subsidiary to it either as to date of completion or convenience of traffic, or that after the world has for years been timidly hesitating at the idea of creating one canal it is now expedient to begin with two, they will, perhaps, be quite right in subscribing to the project; but as they can inform themselves upon these subjects with very little trouble, they will probably not consider the caution suggested yesterday as calculated in the interval to prove damaging in any way to the cause of sound commercial enterprise.—

ISTHMUS OF DARIEN.

To the Editor of the Times.

Sir,—In the letter I wrote to you, which appeared in *The Times* of yesterday, I stated that it was with regret I felt compelled to notice a paragraph in your City Article of Tuesday last on the subject of the proposed navigation across the Isthmus of Darien.

I assure you it is with feelings of actual pain that I find myself called upon to notice another article, emanating from the same pen, which appears in *The Times* of to-day, and I will leave you to judge, on perusal of this letter, whether I have not good grounds for this feeling.

In the article I refer to, the writer endeavours to dispose of my letter on the ground that "its allegations are inaccurate," and he makes, in substance, the following statement, which I shall proceed to answer *seriatim* :

In contradicting my statement, that a draught of 30 feet is not too great for the demands of vessels as they now exist, he states that the draught of La Plata, the largest of the West India steamers, is only between 18 and 19 feet. The fact, which I have ascertained from the office of the owners of the vessel, is that when that ship leaves Southampton for the West Indies her draught is within two inches of 22 feet, and that of the Orinoco rather more. But the writer does not state a fact important to the real merits of the question between us—viz., that the steam vessels Atlantic and Pacific, of Collins' line, both draw about 25 feet, and he must be well aware, when writing on such a subject for the information of the public, that vessels of war, which it is presumed are not to be excluded from this passage, draw 28 feet.

The second statement the writer makes, on the authority of Colonel Childs, the engineer of the Nicaragua scheme (whose able report has been published), is in effect that the canal with 20 feet of water can be constructed at a cost under 7,000,000*l.* sterling, "and that instead of the work involving 100 miles of canalised rivers, the surveys of Colonel Childs show only 47 miles."

Now, I have at this moment Colonel Childs' report before me, with the promoter's autograph upon it, and at page 137 I find the estimate for the depth of 17 feet to be \$31,538,319, which at the present rate of exchange is equal to 6,570,483*l.* sterling, being above the sum stated in my letter. Again, at page 90, Colonel Childs states that in

order to attain a depth of 22 feet, which had been considered desirable, the water section would be increased about 45 per cent., "and the expense of the inland portion would also, by reason of the greater depth of excavation, be increased in a still higher ratio." On this statement, I leave you to judge whether I was incorrect in quoting the authority referred to by your writer for the fact that the increase of depth to 20 feet involved an outlay of about 10,000,000*l.*, instead of 6,000,000*l.* But further, I have reason to know that the English engineers employed in this country by the promoters of the Nicaragua scheme for the satisfaction of the English capitalists, and of whose report it is scarcely to be supposed the writer could be ignorant, came also to the conclusion that the making of the canal 20 feet deep would amount to upwards of \$48,000,000, or 10,000,000*l.* sterling.

In reference to the writer's statement, that the surveys of Colonel Childs show only 47 miles of canalised river, I cannot do better than quote the actual figures from his report at page 88 as follows:—

"47.09 miles of canal navigation.

"90.80 miles of river navigation.

"56.50 miles of lake navigation."

In my letter I stated, that out of a length of 195 miles upwards of 100 miles consisted of canalised river. Again, on this point I leave you to judge, upon the writer's own authority, whether I overstated the facts.

The writer further states, that, instead of the transit through the suggested Nicaragua canal occupying six days, it will occupy between two and three days. Now, on turning to page 88 of Colonel Childs' report you will find that he estimates the passage for sailing vessels at 3½ days; but on looking at the calculation you will see that he allows a detention of only half-an-hour at each lock, and assumes the vessels to be in continuous progress of transit, both day and night. This is practically impossible. At least, I am not aware of any analogous case. And I again ask whether I

was not within a fair estimate of the practical result when I allowed for it six working days?

Other minor points are advanced in the article—as, for instance, that the Nicaragua Canal is intended to terminate in Brito Bay, instead of the Gulf of Fonseca; and that, instead of the country being unhealthy, the territory of Nicaragua is “one of the most favourable districts in the tropics.” As to the first point, I spoke of the Gulf of Fonseca, because it has some aptitudes for a harbour which are wholly wanting in Brito Bay; and on the second point, I do not understand the sense in which the writer uses the word “favourable,” as it is notorious that the neighbourhood of Greytown, the Atlantic entrance to the Nicaragua route, is one of the most unhealthy in that part of the world.

It is true, that in a voyage from New York to California a distance of something like 700 miles (as stated by the writer) would be saved by the Nicaragua route, but then the gain in time by the short passage through the Isthmus of Darien would more than counterbalance the increase of distance even to that portion of the traffic; while to the British and general commerce of the world the Darien navigation would be decidedly preferable both in time and distance.

I have now, I believe, noticed all the positions advanced by the writer in assailing my former statement.

It is not for me to offer any opinion upon the correctness of the charges or the sufficiency of the answers; but I think I may be allowed to ask whether the whole tone of the writer's articles does not evince rather the spirit of a partisan advocating the Nicaragua route, than the impartial judgment of a journalist reviewing a question which may perhaps be fairly termed the most important of the present age.

I remain, Sir, your most obedient, humble servant,

CHARLES FOX.

8, New-street, Spring-gardens, Feb. 10.

From the City Article of *The Times*, 11th Feb., 1853,

It will require forbearance on the Darien question to avoid an interminable altercation. It was stated, with reference to the letter of Sir Charles Fox, inserted on Wednesday, that he had been inaccurate in speaking of the proposed terminus of the Nicaragua Canal as being at the Gulf of Fonseca, whereas it is at Brito Bay. To this Sir Charles replies:—"I spoke of the Gulf of Fonseca because it has some aptitudes for a harbour which are wholly wanting in Brito Bay." The point, however, of the actual position of the terminus, and not of its capabilities, as compared with any other site, was alone under discussion. It was next stated that, instead of the estimate for a 20 feet canal being £10,000,000, it was believed to be under £7,000,000. To meet this it is observed, that Colonel Childs' estimate for one of 17 feet was £6,570,000; that he had spoken of the extended outlay that would be required for one of 22 feet, and that certain English engineers had stated their opinion that one of 20 feet would cost £10,000,000. But it was Colonel Childs' estimates, and not those of any other engineers, English or foreign, that were to be kept in view. There are, doubtless, English engineers who would assert, for instance, that the Darien Canal would cost £30,000,000 instead of 15,000,000, but, unless they could demonstrate that assertion, it would be very unfair to quote it against the results of practical calculations. It is true, that Colonel Childs' first estimates for a 17 feet canal amounted to £6,570,000 (a sum which was created by adding £3,920,000 to what it would cost if it were in a different latitude, and could be executed at New York prices). But it was found also, that his original plans contained some heavy work that might be dispensed with, particulars of which will be seen in the last page of his report; while it is likewise generally understood that many months back the New York company stated, with his full cognizance, that they could undertake to put the entire canal at 20 feet depth, if such depth were desired, under contract with the most responsible American firms for

£6,000,000. It was next stated, that "instead of the draught of any considerable number of modern vessels being 28 feet, that *La Plata*, the largest of the West India steamers, when she arrives at Southampton, before baggage and cargo have been landed, is only between 18 and 19 feet." To this it is replied, that her draught when she *leaves* Southampton is 21 feet 10 inches, and that under similar circumstances the *Atlantic* and *Pacific* of Collins's line both draw about 25 feet. But *La Plata*, when she arrives at San Juan, is in the same condition as when she arrives at Southampton: and, as it would be under such circumstances that she would require to pass the canal, her draught at any other period was not the thing in question. The exceptional fact that two of Collins's steamships draw about 25 feet, makes nothing against the assertion that "no considerable number of modern vessels have a draught of 28 feet." If the proprietors of the Collins line will subscribe the four or five extra millions of pounds that may be demanded, in order to adapt the proposed canal to their few vessels, there would be no difficulty in their being accommodated; but, inasmuch as the question about depth was solely in relation to "the requirements of commerce," and the average burden of the vessels of Great Britain and the United States trading to the Pacific is only about 380 tons, it would be too much to include among these requirements the passage of vessels that would not pay a fraction of interest for the outlay they had occasioned. In the same way, the fact that ships-of-war have been known to draw 28 feet, must be excluded from considerations based simply on mercantile wants, and the return to be obtained for money of private shareholders. If either the English or American government desire that a company, which could rely upon large profits for an outlay of £4,000,000 or £6,000,000, should increase their expenditure to double or treble that amount to meet their special convenience, they can at any time commence negotiations for that purpose. It was next stated, that instead of the country being very unhealthy, it is one of the most

favourable districts within the tropics. To this Sir Charles replies, "I do not understand the sense in which the writer uses the word 'favourable,' as it is notorious that the neighbourhood of Greytown, the Atlantic entrance to the Nicaragua route, is one of the most unhealthy in that part of the world." But Greytown does not constitute Nicaragua, any more than the Pontine Marshes constitute the Roman States. All the Atlantic ports of Central America are unhealthy, but there is no occasion to remain at them, and the interior of Nicaragua, which in the time of the Spanish dominion was the most thickly peopled of the Central American colonies, is described, by those who have experienced most of it, to be "unsurpassed in salubrity by any equal extent of territory under the tropics." "Both climate and temperature," says Lieutenant Bailey, "appear to be extremely favourable to the general health of natives as well as of foreigners, the exceptions being very few, and of trifling consequence, in the injury which they occasion." The next statement was, that instead of the work involving 100 miles of canalized river, the surveys of Colonel Childs show only 47 miles. Sir Charles points out, however, that the route consists of 47 miles of actual canal, and 90 miles of river navigation; and, although the greater part of this river navigation requires little outlay, it is to be presumed that he is right in speaking of it as canalized, since its level is raised by occasional dams and locks. The next statement was, that instead of the transit occupying six days, it is calculated to occupy only between two and three. In reply to this, Sir Charles admits that Colonel Childs estimates the passage of sailing vessels at $3\frac{1}{2}$ days (without any acknowledgment being made that he estimates it for steamers at only two days). At the same time a denial is given of Colonel Childs' correctness; but with the disputes of authorities upon such a point unprofessional persons can have nothing to do. The only thing under discussion was Colonel Childs' report as it stood. Finally, the most important statement of all was, that

instead of there being "no fear that American capitalists will enter upon such a work," the necessity of hastening every political negotiation that would enable it to be commenced formed one of the prominent topics in the last message of President Fillmore. But with regard to this correction, although the whole question as to whether the Darien would be subsidiary to the Nicaragua Canal is affected by it, no remark or acknowledgment is made. Every one of the statements of which Sir Charles complains has now been gone through, besides that to which he has omitted to refer, and which was the most important of the whole. The public can consequently judge whether they contained a single word that could warrant him in protesting that he could not notice without "actual pain"—in speaking of his statements as having been improperly assailed—and, finally, in resorting to the personality of questioning the spirit and motives with which the remarks upon them were put forward. If no one is to question Sir Charles Fox's views, or even to speak of inaccuracies in them, without a risk of this sort, when the question, as he himself admits, is one of the most important of the present age, and when proposals are being issued to the public for a subscription of £15,000,000, there must be an end of all discussion upon anything in which he is concerned. At all events, those who most admire his splendid energies, and who feel the greatest pleasure in the reputation he has attained, will be careful to do him the justice which in such cases he may neglect to maintain for himself, by declining to continue arguments which cannot, without a resort to imputations, be further carried on upon equal terms.—From the *Times* of 12th Feb.

THE ISTHMUS OF DARIEN.

To the Editor of the Times.

Sir,—The tone of the concluding observations of the

writer of your City article of this day is such, as to deprive me alike of the power and the inclination further to pursue a course of observations which appear to convey to his mind an impression of personality, however contrary to my intention.

Allow me, however, in conclusion, simply to state the broad grounds which induced me to decide in favour of the Darien route, and to ask eminent men to join me in inviting the public to raise £75,000 for the preliminary development of this project, instead of adopting the previous Nicaragua scheme.

The Darien navigation, as proposed, will be 40 miles long, 30 feet deep, without locks, and with an excellent natural harbour at each end.

The Nicaragua Canal, as proposed, would be 195 miles long, 17 feet deep, with 28 locks, and between harbours artificially constructed and still altogether inadequate.

At equal depths the Darien navigation could be made for less than half the sum which the Nicaragua must cost. But no depth short of 30 feet will accommodate all the shipping which could benefit by the passage. The Darien navigation, therefore, once made, will be a perfect and complete measure; while the Nicaragua Canal, at 17, or even 20 feet, would afford at best imperfect and limited accommodation.

Thanking you for the courtesy which has accorded to me so much of your space,

I am, Sir, your obedient, humble servant,

CHARLES FOX.

8, New-street, Spring-gardens, Feb. 12.

—From the *Times* of 14th Feb.

THE MOST PRACTICAL NATION.

To the Editor of the Times.

Sir,—I have read with much satisfaction a letter signed “Nemo,” in which the writer, among many other sound

observations, alludes to the great waste of money and valuable energy in the futile attempts to find a north-west passage through the ice of the Polar regions from the Atlantic to the Pacific Ocean, while at the same time our Government has wholly neglected the vastly more important question of a feasible ship-canal route across the narrow barrier which, from Mexico to the *terra firma* of New Granada, separates the two oceans.

So just are his observations, that I cannot avoid mentioning a fact which I have lately ascertained, and which most powerfully corroborates his assertions of the singular apathy which has hitherto prevailed regarding a country lying within 18 days' direct steaming from England, and four days' of Jamaica. Upon examining the Admiralty charts, with a view to the compilation of a full and accurate map of the whole Isthmus, I found to my amazement that there was a discrepancy of no less than $13\frac{1}{2}$ miles in the longitudes of the isthmus in two consecutive charts,—viz., Nos. 10 and 11 of the West Indies. Lest this most extraordinary error may be doubted, I may make reference to the longitude of Garachiné Point, the southern boundary of the mouth of the Gulf of San Miguel which is laid down in sheet 10 as in longitude $78^{\circ} 10'$, and in sheet 11 as in longitude $78^{\circ} 23\frac{1}{2}'$. Volumes could not more strongly show the urgent necessity of at least a survey of the coasts, and of the publication of Captain Kellett's chart, which, however, only contains the Pacific coast.

The writer proceeds to state his opinion of the probability of the existence of a transverse valley, of low elevation, somewhere across the isthmus, and will no doubt be pleased to learn, not only that a valley has been found, but that in a line across the isthmus of Darien, from Caledonia Bay and Port Escoscés, the site of the Scotch settlement of 1698-99, to the Gulf of San Miguel, the whole country is a plain, with the exception of a single ridge of hills, at two miles distance from the Atlantic, with a base of only two miles in width, and that this ridge is divided by transverse

valleys (through which the Aglaseniqua, Aglatomate, and other rivers have their course) into almost isolated hills, as has been minutely explained in my paper read before the British Association at their Edinburgh meeting in July 1850, in my report to Lord Palmerston, dated 15th of January, 1851, and in a pamphlet on the "Isthmus of Darien Ship Canal," lately published by me.

Not satisfied with crossing the Isthmus once only in 1849, I returned again from the Atlantic to the Pacific, having cut a *picadura*, or track for myself through the bush, from Port Escoscés to the river Savana, which I navigated always, except on one occasion, alone, paddling myself in a little canoe. In 1850 I again crossed and recrossed this part of the Isthmus, and again in August and September, 1851, I at several times, and in different lines, crossed from the Savana River to the seabeach on the Atlantic. Further, I have resided on several occasions with the Indians who dwell at some distance from the route; and have invariably been kindly treated by them, and more particularly by those who reside on the banks of the Aglaseniqua or Caledonia River, called by the old Scotch colonists Rio del Oro, or Golden River.

Thus more has been done in the exploration of the Isthmus than "Nemo" appears to be aware of; though what has been discovered has been the result of personal and private enterprise and adventure, and not of any assistance from Government or any public company.

I am, Sir, your most obedient, humble servant,

EDWARD CULLEN, M.D.

302, Strand, Feb. 14.

From *The Times* of 16th February.

Convention between Her Majesty and the United States
of America, relative to the Establishment of a Com-
munication by Ship-Canal between the Atlantic and
Pacific Oceans.

Signed at Washington, April 19, 1850.

[RATIFICATIONS EXCHANGED AT WASHINGTON, JULY 4, 1850.]

*Presented to both Houses of Parliament, by command of
Her Majesty, August, 1850.*

HER Britannic Majesty and the United States of America being desirous of consolidating the relations of amity which so happily subsist between them, by setting forth and fixing in a Convention their views and intentions with reference to any means of communication by Ship-Canal, which may be constructed between the Atlantic and Pacific Oceans, by the way of the River St. Juan de Nicaragua, and either or both of the Lakes of Nicaragua or Managua, to any port or place on the Pacific Ocean;

Her Britannic Majesty has conferred full powers on the Right Honourable Sir Henry Lytton Bulwer, a Member of Her Majesty's Privy Council, Knight Commander of the Most Honourable Order of the Bath, and Envoy Extraordinary and Minister Plenipotentiary of Her Britannic Majesty to the United States; and the President of the United States, on John M. Clayton, Secretary of State of the United States, for the aforesaid purpose; and the said Plenipotentiaries having exchanged their full powers, which were found to be in proper form, have agreed to the following Articles.

ARTICLE I.

THE Governments of Great Britain and the United States hereby declare that neither the one nor the other will ever obtain or maintain for itself an exclusive control over the

said Ship-Canal; agreeing that neither will ever erect or maintain any fortifications commanding the same, or in the vicinity thereof, or occupy, or fortify, or colonise, or assume or exercise any dominion over Nicaragua, Costa Rica, the Mosquito Coast, or any part of Central America; nor will either make use of any protection which either affords, or may afford, or any alliance which either has, or may have, to or with any State of people, for the purpose of erecting or maintaining any such fortifications, or of occupying, fortifying, or colonising Nicaragua, Costa Rica, or the Mosquito Coast, or any part of Central America, or of assuming or exercising dominion over the same. Nor will Great Britain or the United States take advantage of any intimacy or use any alliance, connection, or influence that either may possess with any State or Government through whose territory the said canal may pass, for the purpose of acquiring or holding, directly or indirectly, for the subjects or citizens of the one, any rights or advantages in regard to commerce or navigation through the said canal, which shall not be offered, on the same terms, to the subjects or citizens of the other.

ARTICLE II.

Vessels of Great Britain or the United States traversing the said canal shall, in case of war between the Contracting Parties, be exempted from blockade, detention, or capture by either of the belligerents; and this provision shall extend to such a distance from the two ends of the said canal as may hereafter be found expedient to establish.

ARTICLE III.

In order to secure the construction of the said canal, the Contracting Parties engage that if any such canal shall be undertaken upon fair and equitable terms by any parties having the authority of the Local Government or Governments through whose territory the same may pass, then the persons employed in making the said canal, and their property used or to be used for that object, shall be protected,

from the commencement of the said canal to its completion, by the Governments of Great Britain and the United States, from unjust detention, confiscation, seizure, or any violence whatsoever.

ARTICLE IV.

The Contracting Parties will use whatever influence they respectively exercise with any State, States, or Governments possessing, or claiming to possess, any jurisdiction or right over the territory which the said canal shall traverse, or which shall be near the waters applicable thereto, in order to induce such States or Governments to facilitate the construction of the said canal by every means in their power; and furthermore, Great Britain and the United States agree to use their good offices, wherever or however it may be most expedient, in order to procure the establishment of two free ports, one at each end of the said canal.

ARTICLE V.

The Contracting Parties further engage that when the said canal shall have been completed, they will protect it from interruption, seizure, or unjust confiscation, and that they will guarantee the neutrality thereof, so that the said canal may for ever be open and free, and the capital invested therein secure. Nevertheless, the Governments of Great Britain and the United States, in according their protection to the construction of the said canal, and guaranteeing its neutrality and security when completed, always understand that this protection and guarantee are granted conditionally, and may be withdrawn by both Governments, or either Government, if both Governments or either Government should deem that the persons or company undertaking or managing the same adopt or establish such regulations concerning the traffic thereupon, as are contrary to the spirit and intention of this Convention: either by making unfair discriminations in favour of the commerce of one of the Contracting Parties over the commerce of the other, or by imposing oppressive exactions, or unreasonable tolls upon

passengers, vessels, goods, wares, merchandize, or other articles. Neither party, however, shall withdraw the aforesaid protection and guarantee, without first giving six months' notice to the other.

ARTICLE VI.

The Contracting Parties in this Convention engage to invite every State with which both or either have friendly intercourse, to enter into stipulations with them similar to those which they have entered into with each other, to the end that all other States may share in the honour and advantage of having contributed to a work of such general interest and importance as the canal herein contemplated; and the Contracting Parties likewise agree that each shall enter into treaty stipulations with such of the Central American States as they may deem advisable, for the purpose of more effectually carrying out the great design of this Convention; namely, that of constructing and maintaining the said canal as a ship communication between the two Oceans for the benefit of mankind, on equal terms to all, and of protecting the same; and they also agree that the good offices of either shall be employed, when requested by the other, in aiding and assisting the negotiation of such treaty stipulations; and should any differences arise as to right or property over the territory through which the said canal shall pass, between the States or Governments of Central America, and such differences should in any way impede or obstruct the execution of the said canal, the Governments of Great Britain and the United States will use their good offices to settle such differences in the manner best suited to promote the interests of the said canal, and to strengthen the bonds of friendship and alliance which exist between the Contracting Parties.

ARTICLE VII.

It being desirable that no time should be unnecessarily lost in commencing and constructing the said canal, the

Governments of Great Britain and the United States determine to give their support and encouragement to such persons or company as may first offer to commence the same with the necessary capital, the consent of the local authorities, and on such principles as accord with the spirit and intention of this Convention; and if any persons or company should already have, with any State through which the proposed Ship-canal may pass, a contract for the construction of such a canal as that specified in this Convention, to the stipulations of which contract neither of the Contracting Parties in this Convention have any just cause to object, and the said persons or Company shall, moreover, have made preparations and expended time, money, and trouble on the faith of such contract, it is hereby agreed, that such persons or company shall have a priority of claim over every other person, persons, or company, to the protection of the Governments of Great Britain and the United States, and be allowed a year, from the date of the exchange of the ratifications of this convention, for concluding their arrangements, and presenting evidence of sufficient capital subscribed to accomplish the contemplated undertaking; it being understood that if, at the expiration of the aforesaid period, such persons or company be not able to commence and carry out the proposed enterprise, then the Governments of Great Britain and the United States shall be free to afford their protection to any other persons or company that shall be prepared to commence and proceed with the construction of the canal in question.

ARTICLE VIII.

The Governments of Great Britain and the United States having not only desired, in entering into this Convention, to accomplish a particular object, but also to establish a general principle, they hereby agree* to extend their protection by treaty stipulations to any other practicable com-

* This extends the provisos of the Treaty to the Darien Ship-Canal Company, E.C.

munications, whether by canal or railway, across the isthmus which connects North and South America; and especially to the inter-oceanic communications, should the same prove to be practicable, whether by canal or railway, which are now proposed to be established by the way of Tehuantepec or Panama. In granting, however, their joint protection to any such canals or railways as are by this Article specified, it is always understood by Great Britain and the United States, that the parties constructing or owning the same shall impose no other charges or conditions of traffic thereupon than the aforesaid Governments shall approve of as just and equitable; and that the same canals or railways, being open to the subjects and citizens of Great Britain and the United States on equal terms, shall also be open on like terms to the subjects and citizens of every other State which is willing to grant thereto such protection as Great Britain and the United States engage to afford.

ARTICLE IX.

The Ratifications of this Convention shall be exchanged at Washington within six months from this day, or sooner if possible.

In faith whereof we, the respective Plenipotentiaries, have signed this Convention, and have hereunto affixed our seals.

Done at Washington, the nineteenth day of April, Anno Domini, One thousand eight hundred and fifty.

(Signed)

HENRY LYTTON BULWER, (L.S.)

JOHN M. CLAYTON, (L.S.)

VI.

THE SCOTCH COLONY OF DARIEN.

“EIGHTEEN years had elapsed from the first discovery of San Salvador, one of the Bahama group, by the adventurous Columbus,* before Spain attempted to form a settlement on the shores of Terra Firma; and it was only in the year 510 that Vasco Nuñez de Balboa first attempted the establishment of a colony, somewhere in the marshy and insalubrious district which constitutes the delta embraced within the mouths of the great river of Chocò, best known by the name of the Atrato, which pours its accumulated waters into the south-western angle of the Gulf of Darien. This settlement, which was named by its founder *Santa Maria el Antigua*, being found, in its swampy and uncleared condition, little favourable to the health of the European residents, was abandoned by its population after a calamitous trial of not more than eight years, and the settlement transferred to the site of the present city of Panama:† while not a vestige remains to mark the spot where Balboa first pitched his tents.

“After an interval of nearly two centuries, during which the arms of Spain had been unable to subjugate the warlike Indians, who claimed the territory as their ancient and rightful inheritance, nearly the same spot was selected‡ by our enlightened and enterprising countryman, Paterson, for the site of his colony, New Caledonia, which—had not the blindness of commercial jealousy, and the total ignorance of those fundamental principles which form the surest foundation of commercial prosperity, blighted it in the bud—would have proved itself, in the course of time, one of the brightest and the richest of the jewels which adorn the British crown.

* October, 1492.

† A.D. 1518.

‡ A.D. 1699.

"Of this bold, but unfortunate undertaking, Dalrymple, in the second volume of his valuable 'Memoirs of Great Britain and Ireland,' has given an interesting and instructive account, from which, as it is not in the hands of every reader, I shall extract such particulars as are requisite for the illustration of my subject.

"Paterson, as Dalrymple acquaints us, was a Scotch clergyman, who made his profession subservient to a strong desire to explore distant regions, and visit foreign lands. With this view, he visited the continent of South America, in the capacity of a missionary for the civilisation of the Indians, and their conversion to Christianity.

"In the prosecution of these laudable designs, it was his fortune to fall in with two individuals, of considerable celebrity and no small amount of observation; these were Captain Dampier and Mr. Wafer, both of whom afterwards gave to the world the result of their experience, the one in an account of his voyages, and the other of his travels through the narrowest parts of that ridge of partition which has for ages prevented the waters of the tropical Atlantic from mingling with those of the Pacific. But the greatest amount of his information was derived from the buccaneers, whose contraband occupations brought them practically acquainted with the most intricate parts of the country interposed between the two seas. From these sources Paterson was enabled to gather an amount of information, the exactness of which he resolved to verify by personal observation; the result of which was, that he ascertained the existence, in the Isthmus of Darien, of a tract of country, extending from the Atlantic to the Pacific, of which the Spaniards never had been able to obtain possession, and with the Indian inhabitants of which they carried on perpetual hostilities; that there lay a chain of uninhabited islands along the Atlantic side of the coast, clothed with perennial forests, and possessing great natural strength, the seas adjoining which abounded in turtle and the sea-cow or manatee.

“He further learned that, between Porto Bello and Carthage, at the distance of about fifty leagues from each, there was a place called Acta,§ near the mouth of the river of Darien, or Atrato, where there was a natural harbour, sufficiently spacious to admit the largest fleet, sheltered from the wind by a number of islands, which broke the force of the sea, and protected from the assaults of enemies by a promontory which commanded the entrance, as well as by sunken rocks in the passage itself; that on the Pacific side of this tract of country, there were other harbours, equally commodious and secure; while an elevated ridge traversed the intermediate space, on which the temperature was at all times deliciously cool, covered with forests unencumbered with underwood, and affording a free passage to the wind, so as to prevent the accumulation of moisture beneath their shade, And he ascertained also, that the soil of this elevated region was rich and productive, yielding spontaneously tropical fruits, plants, and roots, in the greatest profusion; that the whole of this tract was well adapted for the construction of roads, by which a passage might be effected between the two seas within the compass of a day.

“Such is the substance of the information collected by this enterprising Scotchman in the course of his peregrinations, and out of which sprang the idea which suggested itself to his active mind, of rendering this favoured spot conducive to the prosperity of his native land.

“He was well aware that ships going free and pursuing a course nearly direct, were navigated by fewer hands, encountered fewer dangers, and reached their port of destination in less time than those which required greater diversity of winds; which were more exposed to detention by calms, and had to seek their port by a more tortuous course. Vessels of the largest tonnage, he well knew, were to be met with in the South Sea, navigated by a very reduced number of hands, who had little other labour to perform than

§ This is Agla, or Aglaseniqua in Caledonia Bay, E.C.

adjusting their sails in a proper trim to suit the direction of the wind, at the commencement of their voyage, and taking their turn at the helm to keep their vessel to her course. He likewise knew, that vessels bound to Darien, after gaining the latitude of the trade-winds, glided along to their destination with even greater ease and security than when floating down the placid stream of the gentlest river.

"By taking, therefore, the direction of Darien, and forming a ship-canal, or other line of communication, between it and such a point on the coast of the Pacific as would allow a vessel departing from it to clear the Punta Mariata, at the extreme south-western extremity of the deep bay of Panama, the voyage to India must, he conceived, not only be abridged of much of its duration by the accustomed route, but be disarmed of more than a moiety of its hazards; while the whole distance being accomplished within one hemisphere, the harassing and often injurious calms which prevail in the vicinity of the equinoctial, would be escaped.

"He was equally aware that vessels, on their return from India, by proceeding as far north as the 40th parallel, fell in with the winds invariably blowing in that latitude from the westward, and, by availing themselves of these to reach the coast of Mexico, they were enabled to take advantage of the land-winds which blow with almost equal regularity from north to south, propelling them with a flowing sheet to the entrance of the Bay of Panama, whence, by trimming their sails to suit the direction of the trade-winds, a slightly oblique course would conduct them back to the point of the coast of Darien from which they originally departed; after which the dangers of their homeward navigation would be those only which are incidental to every homeward-bound voyage from the West Indies.

"Such were the considerations which influenced Paterson in the selection of a site for his projected colony, the success of which would have conferred incalculable advantages, not only upon the land of his nativity, but upon the distant

shores of India and China, and have broken down that iron barrier which has so long excluded the populous empire of Japan from the blessings of Christianity and civilisation.

“ But the mind of Paterson we may well imagine to have been, in some degree, likewise influenced by the discovery of gold in some parts of the Isthmus, and the expectation of meeting it in still greater profusion, from its constituting a continuation of the auriferous and platiniferous soil of the Chocò.

“ Amid, however, the dazzling temptations of all these brilliant advantages, Paterson never once lost sight of the claims of others, in the eager pursuit of his own views. Treading in the worthy steps of the illustrious founder of the State of Pennsylvania, instead of imbruing his hands in the blood of the Indians, and taking by brute force that to which he had no honest claim, he entered into a negociation with them for the purchase of the territory required for his colony, upon equitable terms; and having thus obtained an unquestionable right to the soil, named his acquisition New Caledonia, and fixed upon the ancient Acta as the site of his first town, to which he gave the appellation of Saint Andrew.

“ This town was situated on a harbour, inclosed on one side by a narrow tongue of land, which divided it from the sea; and on the other, by a mountain, which rose, as was estimated, to the altitude of a mile, crowned with a signal-station, commanding a rich and extensive prospect, where persons were constantly stationed to keep a vigilant look-out, and give prompt notice of any impending danger. The settlement was further protected by a fort, mounting fifty pieces of ordnance. Besides attending to the security of his infant colony against external assault, Paterson provided for its commercial prosperity, with the far-seeing eye of a liberal and enlightened statesman; not only freeing commerce from all those unwise obstructions which the ignorance of our forefathers foolishly introduced, but liberating the mind from all those shackles of human creeds, which,

borrowing their tenets from sources at variance with the Scripture, exalt sectarianism above Christianity. Paterson presented the rare example of a clergyman devoid of bigotry, and holding out the right hand of Christian fellowship to all who chose to enrol themselves in his colony, without distinction of complexion, of country, or of creed—recollecting the important truth propounded by the apostle, that ‘of one blood hath God made all the nations of the earth.’

“The failure of this attempt to divert the tide of commerce with the countries bordering on the Pacific from the long-established routes hitherto pursued to the central isthmus of America, arose from causes which are little likely to recur at the present day, and *none from any real impracticability in the scheme, or from the malaria arising from the swampy and feverish character of the uncleared and undrained locality:*”*

The William Paterson here mentioned was the founder of the Bank of England, a plan from which he derived no advantages, it having been taken out of his hands by larger capitalists, who went to the extent of even denying his right at the time, either to remuneration or original property in the conception. Bishop Burnett, indeed, who stopped at nothing in behalf of his hero, King William III., readily discredits Paterson’s claims, as may be seen by a reference to his history, or to the *Gentleman’s Magazine*, vol. lxii. p. 990, where some curious passages are collected on this point. Posterity, however, has done him justice; and in Mr. Francis’s History of the Bank of England, an elaborate memoir of William Paterson appears, as the acknowledged first Governor, and originator of that admirable institution.

Into the early details of the difficulties Paterson met with

* I am indebted for the above to the first of a series of exceedingly interesting and beautiful “Letters on the advantages and practicability of forming a junction between the Atlantic and Pacific Oceans,” from the learned Dr. Hamilton, of Plymouth, to S. Banister, Esq., in *Colburn’s New Monthly Magazine*, from July to December, 1850.

in forming his company for colonising Darien, it is not my purpose to enter. It may, however, be interesting to give the names of the original parties and promoters, as they appear in the "Act for the Company trading to Africa and the Indies," 1695:—

John, Lord Belhaven.

Adam Cockburn, of Ormestown.

Lord Justice Clerk.

Mr. Francis Montgomery, of Giffen.

Sir John Maxwell, of Pollock.

Sir Robert Chiesly.

John Swinton, present Provost of Edinburgh, of that ilk:

Mr. Robert Blackwood, } Merchants in Edinburgh.
Mr. James Balfour, }

Mr. John Corss, Merchant in Glasgow.

William Paterson,

James Fowlis,

David Nairn,

Thomas Deans,

James Chiesly,

James Smith,

Thomas Coutts,

Hugh Frazer,

Joseph Cohen D'Azevedo,

Walter Stewart,

Merchants
in
London.

The original subscription list is preserved amongst a mass of papers in the Advocate's Library, Edinburgh, which were found some years ago, with the books and accounts of the Company, locked up in an old oak chest.

The following names occur amongst those who signed the Company's deed:—Elizabeth Lady Southhouse, for William Fullerton, son of John Fullerton, of Kinaven, her grandchild: for herself, and failing of her, her grandchildren, £100; George Nisbett, convener for the Trades of Glasgow, £400; Robert Stevenson, for the wrights of Glasgow, £100; William Cumming, visitor of the maltmen of Glas

gow, £200; John Bryce, deacon of the cordwainers of Glasgow, £100; Roderick Pedison, in the name of the cordwainers of Aberdeen, £100; James Pringle, of Torwoodlie, curator to George Pringle, of Greenknow, his nephew, by his desire, and with the consent of the remaining curators, and in his name, £400.

"It was Paterson's original and ostensible design," says Malcolm Laing, a Scottish historian, one of whose ancestors was a subscriber to the Company, "to establish an East Indian trade with Scotland, to which foreign merchants, impatient of the exclusive companies in England and Holland, might subscribe. But a secret and magnificent plan was engrafted by Paterson on his original designs. During his voyages with the buccaneers, he had probably visited the Isthmus of Darien, of which a considerable part was unoccupied, or, as he conceived, unappropriated, by the Spaniards, and inhabited by tribes of independent Indians, hostile to their name. On each side of the Isthmus he prepared to establish an emporium for the trade of the opposite continents; that the manufactures of Europe and the slaves of Africa, when transported to the Gulf of Darien, and conveyed by land across the ridge of mountains that intersect the Isthmus, might be exchanged for the produce of Spanish America, and for the rich merchandise of Asia, imported to the Gulf of St. Michael, or to the river Sambù, in the Bay of Panama.* The same trade-winds that wafted the European commodities across the Atlantic, would carry them across the Pacific Ocean to Asia; the ships from each continent would return loaded with the produce of the others, while the ships from Europe would return with the produce of both the Indies. To unite the commerce of the two Indies, by a colony planted in the Isthmus of Darien, or, in his own language, to wrest the 'keys of the world' from Spain, was certainly the conception of no vulgar mind. It may be compared with the noblest and the most successful of

* The Sambù is in the Bay of Garachiné (see Map).

Alexander's designs—to establish a mart in Egypt, through which the commerce of India might flow for ages—and was worthy of Spain to execute. But the schemes of Paterson were addressed to one of the poorest nations in Europe, and recommended by advantages more immediate, and to the Scots more attractive. He represented the natural fertility of the soil as adapted to the most valuable productions of the tropical climates; and to the mines of gold, with which the Isthmus abounded, as sufficient to gratify their most insatiate desires. With a wiser policy, he proposed to render the colony a free port, where no distinction of party, religion, or nation, should prevail. His schemes were communicated to a select number; and as they were gradually suspected or suffered to transpire, the commercial ideas of the Scots were expanded, and they began to grasp at the riches of both the Indies."

I now take up the story from an excellent *précis* given by poor Eliot Warburton, in his novel entitled "Darien." I have followed him carefully through all the authorities and writers upon that subject, and found him invariably (except in one instance) correct.

"So far all went well—the subscription-lists were full and closed. Scotland had contributed £400,000, half of all the circulating capital in the country; England added £300,000; Hamburgh and Holland made up £200,000 more. With this vast sum, considering the time, Paterson and his associates went to work with energy, drawing freely on their supposed capital for the equipment of the first expedition on a scale commensurate with its importance. Its proposed magnitude surprised even the London merchants. A panic suddenly seized the East India Company; for the East Indies (to be traded with from the opposite side of the Isthmus) had been unhappily inserted in the Charter to Paterson's Company, as being within the limits of their power to trade. The East India Company remonstrated by petition to the king. The English Parliament then met; and the Darien scheme was too popular a subject

not to be made a matter of eager debate. The feeling of the Parliament was hostile. It even impeached some of its members for joining in a scheme 'so injurious to English commerce.' The king saw fit to yield to the altered tone of public feeling: he actually made a sort of apology for the encouragement he had bestowed upon the scheme: he confessed 'that he had been ill-advised in Scotland'; and he at once revoked all his favourable dispositions towards the Company. The English subscriptions were withdrawn; and, under a threat of England's displeasure, Hamburgh and Holland, after some squabbling (and deprecating any fear of England as their motive for doing so), likewise withdrew.

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"The hope and faith of the Scottish people soared all the higher for the desertion of their allies. The preparations for the expedition were pressed forward. Diminished by more than half as were their resources, the equipment lost nothing of its pretensions. The consequence was, that five ships sailed with a stinted and miserable provision, scarcely sufficient to have carried them in comfort on a cruising voyage among Christian lands; much less across the wide Atlantic, through hostile regions, along savage shores.

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"The members of the expedition were as ill fitted for their purpose as the ships themselves. The difficulty of collecting subscriptions was great, notwithstanding the enthusiasm of the subscribers. It was a period of severe scarcity moreover, and provisions were enormously dear: hence the temptation to adulterate them was greater than usual, and it was extensively done. Scotland was dishonoured by the promoters of her first and last attempt to found a colony: William III. did not do more to cause the ruin of the expedition, than these earnest yet dishonourable men.

"At length the expedition was pronounced ready to set

sail. The rotten ships, gaily painted and bedecked with flaunting flags, were filled with rotten provisions most carefully made up, in order to conceal the imposture. Certain bales of goods and merchandise, also of a very inferior description, were placed in the ships, in order to traffic with the natives of the Land of Promise, as well as with the Christian inhabitants of the West India Islands, for provisions. With these goods invoices were sent, fixing an exorbitant value upon every article.

“To crown all, these ill-fated ships were commanded by coarse, brutal, and ignorant captains, haters of and hostile to one another. The ‘Council’ which accompanied them had no decisive authority. There was no chief, and every one aspired to command: the ingenuity of men could not have devised a plan more evidently anarchical. *Paterson had been allowed no voice in any of the proposed arrangements; through jealousy, he had not even been named as one of the Council*: he entered his ship as ignorant of her equipment as any seaman on board. He proposed, even then, to hold an inspection of the stores before the ships weighed anchor; but this was angrily forbidden, for reasons which are not difficult to divine.”

I find in some of the papers of the Scotch Colony, that he was pursued by bailiffs when he was about to embark.

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“No less than three hundred, it is said, of the best blood in Scotland were among the emigrants (1,200 in all). With them went many of their servants and husbandmen, determined, with clanman loyalty, to follow the fortunes of their young masters, for good or ill, whithersoever they might lead. These poor fellows also left behind them all their household ties; for the heart of Scotland, high and low, went with the Darien expedition.”

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The papers published by the Bannatyne Club contain some remarkable particulars of this voyage, and narrate the vain efforts of Paterson to prevail upon the sea-captains to

purchase provisions from a Captain Moore, whom they met on the voyage.

THE ARRIVAL.—ISLA DEL ORO.—“ Thus in high hopes and spirits the adventurers traversed the Atlantic with favouring breezes, and on the 30th of October they came in sight of the New World. A wide and vague extent of islands, and bold cliffs, and swampy shores, was there; along these the mariners groped their way cautiously, until, on the 1st of November, they came in sight of the long-desired Golden Island. Gloriously beautiful it seemed to the longing eyes of the emigrants, with its rich foliage and graceful undulations of bright green sward; and lofty trees bending over the calm crystalline sea, in which their abounding fruit and plummy foliage was reflected. The isle was only three miles in circumference, but it stood forth like a beautiful specimen of the vast regions that lay beyond. All that was visible seemed as fair; the same wild luxuriance of vegetation, the same promise of fertility, the same loveliness of feature, to which the distant mountains gave a deeper interest in Scottish eyes.”

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PORT ESCOSCÉS.—“ On the 27th of October,” says the writer of “A Defence of the Scots’ Colony, with a Description of Darien,” published at Edinburgh in 1799, “our ships came to anchor in a fair sandy bay, three leagues west off the Gulf of Darien. We have an excellent harbour, surrounded with high mountains, capable of holding one thousand sail, land-locked, and safe from all winds and tempests. The mouth of the harbour is about a random cannon-shot over, formed by a peninsula on the one side and a point of land on the other. In the middle of the entrance there is a rock three feet above water, upon which the sea beats most terribly when the wind blows hard; and within the points there is a small rock, that lies a little under water. On both sides of these rocks there is a very good wide channel for ships to come in; that on the south side is three cables long and

seven fathoms deep, and that on the north side two cables long. From the two outermost points the harbour runs away east a mile and a half; and near the middle, on the right hand, a point of land shoots out into the bay. . . . The bay within is, for the most part, six fathom water, and till you come within a cable's length of the shore, three fathoms and a half, so that a quay might be built, to which great ships may lay their sides and unload. The peninsula lies on the left hand, is a mile and a half in length, very steep, and high towards the sea, so that it would be difficult for anybody to land till you come to the Isthmus, where there is a small sandy bay, that little ships may put into. There are several rivers of very good water that fall into the bay; and it abounds so with excellent fish, that we can with ease take more than it is possible for us to destroy, having sometimes caught a hundred and forty at a draught. Amongst others there are tortoises, which are excellent meat, and some of them above six cwt."

FUTURE PROSPECTS.—DESCRIPTION OF CALEDONIAN HARBOUR.—"Before him (Paterson), at the mouth of the harbour, lay the Golden Island; within among the forests gleamed the Golden River (Rio Del Oro); high up in the mountains, his eye could trace where lay the *Golden Mines of Cana*.

"But it was not gold he then sought, for nobler visions occupied his mind. No greater idea than his had been formed since the time of Columbus: the connection of the two great oceans; the abolition of distance and danger; the saving of time—so important to man, whose schemes are so far extended, and whose life is so short!

"On that lovely and neglected shore his imagination pictured the cities of a great colony, founded, as never colony before was founded, on principles of perfect freedom of religion and trade. 'This union of the two great oceans, this door of the seas and key of the universe,' as the projector described it, 'was to form a nucleus for a new system of beneficent wealth and benignant power.'"

The authenticity of this description is proved by various passages I have quoted in the notes to the body of this work.

PORT ESCOSCÉS.—“And now behold the little fleet of Scottish ships entering the fine harbour Acta, slowly and cautiously. The entrance is not only narrow, but guarded by diagonal shelves of rocks, between which you can alone steer with safety. Thus vessels entering this harbour appear as if they were sailing for the opposite shore; or as if, even with a leading wind, they were tacking to their destination. Once within the harbour's mouth, however, the basin is all that a seaman can desire: almost land-locked, and of capacity to hold five hundred ships, deep, sand at bottom, and the water so clear, that five fathom deep you can see the shells and coral fragments as through the purest glass. A wide bay, fringed with a yellow shore, which seemed to the eager eyes of the emigrants like golden sands, spread round. Mangroves dropped into the water in many places, and were laden with oysters as with fruit. Above this leafy shore, arose stately and graceful trees, opening at intervals in pleasant glades; then hills succeeded, bounded by mountains, whence flowed many streams, flashing in cascades among the rocks, or gleaning in tranquil rivers along the plain.”—*Warburton*.

CALEDONIAN BAY.—“About a cannon-shot to the southward, a peninsula, with a deep harbour at its extremity, ran out into the sea. The outer arm of the harbour was level, and as well fitted for artificial defence as the opposite part was formidable by nature. But within these defences, and their protected harbour, lay a wide, calm, sheltered bay; capable of containing all the fleets of Europe. From its western shore, two fine rivers discharged themselves into the bay; and rich savannahs, and orange, and palm-tree groves, bordered the sea-board round.”

In the first letter sent from New Caledonia by the Council of the Colony—which I find given at p. 10 of “An Enquiry into the Cause of the Miscarriage of the Scots’

Colony at Darien," Glasgow, 1700—a pamphlet for which King William issued a proclamation against its author, offering a reward for his arrest—the following passages occur:—

"The wealth, fruitfulness, health, and good situation of the country proves far the better, much above our greatest expectation, which God Almighty seems to have wonderfully reserved for this occasion, and even to have prepared our way, and wonderfully disposed the Indies to that purpose.

"As to the country, *we find it very healthful*; for although we arrived here in the rainy season, from which we had little or no shelter for several weeks together, and many sick amongst us, yet they are so far recovered, and in so good a state of health, as could hardly anywhere be expected among such a number of men together; nor know we anything of those several dangerous and mortal distempers so prevalent in the English and other American Islands.

"In fruitfulness this country seems not to give place to any in the world, for we have seen several of the fruits, as cocoa nuts, whereof chocolate is made, bonellos, sugar-cane, maize, oranges, plantains, mango, yams, and several others, all of them the best of their kind anywhere found.

"Nay, there is hardly a spot of ground here but what may be cultivated; for even upon the very tops and sides of the hills and mountains, there is commonly three or four foot deep of rich earth, without so much as a stone to be found therein. Here is good hunting and fowling, and excellent fishing in the bays and creeks of the coast, so that, could we improve the year, just now begun, we should be able to subsist of ourselves.

"Signed,

ROBERT JOLLEY.
J. MONTGOMEREY.
DAN. MACKAY.
ROBT. PENNICOOK.
ROBT. PINCARTON.
WM. PATERSON.

"We intreat you to send us a good engineer, who is extremely wanted here, this place being capable of being strongly fortified. You will understand by ours from Maderas, the dangers as well as the tediousness of our passage north-about, so that, if the ships can conveniently be fitted out from Clyde, it will save a great deal of time in their passage, and be far less hazardous."

In the meanwhile, no time had been lost by the Dutch and English East India Companies, in bringing every engine to bear upon the King for the ruin of the colony. A Captain Long, whose dispatch was found in the papers of the Company, was cruising on the coast, and endeavoured to set the Indians upon them, but failed. He, however, proceeded to the West Indies, and did his best to cut off all supplies, as well as to seduce some of their best men—carpenters and others. The Spanish Ambassador addressed a protest to the King of England, which we find fully repeated in a pamphlet distributed by him at the time, entitled, "Information concernant l’Affaire de Darien." In this, after reciting the bull of the Pope, by which America was given to Ferdinand and Isabella, he goes on as follows:—

XI. As regards the province of Darien, in particular, it is notorious that it was discovered at the same time (1500); and, as a proof of this, when the above-mentioned King Ferdinand, having sent Alonzo Ojeda and Diego de Nicuesa, as governors of the country, they quarrelled about Darien, and each pretended that it was in his portion of *terra firma*. Now, the province given to Ojeda, was from Cape de la Vela to the half of the Gulf of Uraba, under the name of New Andalusia, and that of Diego de Nicuesa, from the other half of the same Gulf, up to Cape Gracias a Dios, so that Darien was equally divided between the two—one half being in one, and the other half in the other, Government. But at last they were brought, by Juan de la Cosa, the pilot, to agree that the Rio Grande

del Darien* should serve as their boundary, and that one should take its eastern bank, and the other the western.

XII. Upon the settlement of this division, Alonzo Ojeda landed at Carthagena, and laid, in 1510, the foundation of the town of St. Sebastian, at the end of the Gulf of Uraba: and Nicuesa went to Veragua, where Christopher Columbus had already founded a town. This same Nicuesa peopled and built, afterwards, that of Nombre de Dios.

X. As for Ojeda, he was killed the same year, in a combat against the Indians, and the Bachelor Enciso, who came with Vasco Nuñez, as governor, in his place, built in the same year (1510) in the Province of Darien, the town of Santa Maria el Antigua del Darien, in accordance with a vow which he had made to the Spaniards in a battle.

XIV. This town became thenceforth the capital of New Andalusia, and the residence of its governors, the first of whom, after the Bachelor Enciso, was Vasco Nuñez, the same who sent to Europe three hundred "marcs" of gold found in this place, and under whom the kingdom of Terra Firma commenced to be called Golden Castile. He it was also, in 1513, who discovered the South Sea.

Predarias d'Avila, surnamed El Justador, succeeded him in the month of July, 1514, and, at the same time, the king sent Juan de Quevedo as bishop to Darien, Pope Leo X. having given the necessary rules to that effect; so that Santa Maria el Antigua del Darien was not only the fourth Christian town built on the continent of the West Indies, but the first, also, which was made an episcopal city.

XV. In the same year, King Ferdinand issued special regulations for the government of this province, and gave it greater privileges, especially to the town of Santa Maria el Antigua, to which, in 1515, he accorded the right of bearing as its arms — "Gules, a golden castle, surmounted by a sun of the same, supported on the right by a tiger, and on the left by a crocodile, with these words as a legend, 'La Imagen de Nuestra Signora del Antigua.'"

* Atrato.

XVI. In 1516, Acla was built, in the same province, five leagues from the shore (riveau*) of the North Sea. After mentioning the removal of the capital from Santa Maria el Antigua to Panama, on account of the insalubrity of the spot, the writer goes on to argue against the assumption of the Scots, that Darien had either been abandoned or never possessed, and singularly observes—"No one has a right to argue that a country has passed out of the hands of its original and legitimate possessors, because they have neglected it. That the western part of Ireland—from Sligo to Limerick—can scarcely be called inhabited, is a thing that all the world knows; but, nevertheless, does it not belong to the crown of England? And with what colourable pretence could any one take possession of it?"

The writer then refers to the actual possession by the Spaniards, of the towns of "Santa Maria de las Minas" (Cana), Scuchaderos,† and "if Darien is to be regarded as of the extent now given it," the towns of Cheapo, Concepcion,‡ the castle of St. Jago, and many others. Reference is also made to the country being mapped out exactly, especially in Oexmelin's and Dampier's works; and it is asserted that there are not more than a thousand Indians in the whole Isthmus who do not speak Spanish.

XXIII. Nor is it to be doubted that the King of England will use his power to punish these Scotch encroachers severely, after the fashion in which his royal predecessors,

* This is doubtful, as most accounts agree that Acla was on the sea coast; the year 1516 was the date of its being fortified, but it was founded two years before, by Gabriel de Rojas.

† This place was situated on the north bank of the Tuyra, just above the east point of the Savana mouth. It has been abandoned long ago.

‡ This passage in the Spanish Ambassador's protest proves the distinction that the old Spaniards made between Darien and Panama; and also that the boundary line between them was from Concepcion in San Blas Bay to Chepo, as he does not refer to the possession by the Spaniards of Panama, Portobello, or any place westward of Chepo and Concepcion, but strictly confines himself to Darien.

kings and queens, and, in particular, James I., whose signal justice I shall give here in a few words.

XXIV. "A certain English knight, named Walter Raleigh, obtained from this prince, in 1617, a commission to occupy himself (*négocié*) in these parts of the New World, which had not yet been discovered. He abused these powers by making incursions into Guyana, along the river Orinoco, and into Golden Castile. His son was killed here; and those he thought to surprise defended themselves so valiantly, that he was obliged to retreat to his ships. But he did not get off quite in this way; for on his return to England, Count Gondomar, the ambassador from Spain, complained to the king, Raleigh was arrested, sent to the Tower, and condemned by the Court of King's Bench to be beheaded."

XXV. Forty years afterwards two Captains, named Oxenham and Drake, entered upon a similar design; but the first was taken by Orega, a Spanish captain, and conducted to Lima, where he received the punishment he deserved; and as for Drake, though it turned out different with him, for he came back freighted with a rich booty, yet it availed him not a whit the more, for Queen Elizabeth, who then reigned in England, made him restore it in the bulk (!) to Mendoza, the Spanish Ambassador, and expressly prohibited Drake from all such enterprises for the future (!)

XXVI. "It is quite clear then, that his Britannic Majesty will follow these excellent examples, and give full satisfaction and reparation for any damage committed." This memorial was not without its effects, for King William III., to his eternal disgrace, directed that all supplies, or assistance, or correspondence between the Scotch colonists and the West Indies and the British possessions in America, should be stopped, and thus prepared to starve out the colony.

Had it not been for England's fatal jealousy, says Mr. Warburton, and her King's unworthy prejudice, there is little doubt that a city would there have been founded, to

which all the commercial capital of the world must finally have yielded precedence.

CLIMATE.—“It was in the very spring time of that climate; a genial sunshine poured its glory on the stately forests, the green valleys, and the crystal waters that surrounded them. “Sweet balmy odours floated on the breeze; the woods resounded with the melody of brilliant birds.” (Here Mr. Warburton is mistaken, the colonists arrived in the rainy season, as is shewn by “Mr. Rose’s Journal,” and the subsequent letter of Adam Cleghorn, of Boston.

WEATHER.—“The rains begin in May, and last four or five months, but are very gentle at first, like April showers; but after are more violent, inasmuch that sometimes they make a kind of deluge, covering the ground in some places seven or eight foot all on a suddain, and carrying down trees with great impetuosity; but those that are acquainted with the country know how to avoid the danger. But these rains, even in the wettest months, are not so continued, but there are many fair days, and sometimes a week together, with small thunder showers, and refreshing breezes of air. The pleasant dry months are December, January, February, March, and April. The sky is then very serene, and not so much as a cloud to be seen, and methinks, considering the warm situation of the climate, it is extremely pleasant, everything having a fresh verdure and odour; the air gently fanning the inhabitants, so that the heat is so far from being troublesome that it is delectable.”—*History of Caledonia*, by a gentleman lately arrived, London, 1699.

HUNTING AND FISHING.—“By universal consent the emigrants made holiday after landing. They hunted the wild boar; they fished in the abounding streams and swarming seas; they explored the woods, where almost every bough was bending with fruit, and in the soft calm evenings they would climb to the summit of a lofty hill, that reached far out upon the sea with all its wooded islands; there they would gaze long and earnestly towards their distant home, and with mute lips, but sympathising eyes,

communicate each to the other pleasant yet mournful thoughts of Scotland.

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"The magnificent forests of the Isthmus were full of charms, inexhaustible in their variety of scenery and of game. The iguana and the young monkeys, up to the wild boar and the jaguar, there was a wide range for the sportsman. Among birds, the partridge, the scarlet curry, the sweet-voiced coroson, or wild turkey, the beautiful chicaly of the woodpecker tribe; parrots and macaws of every colour; swan-white pelicans, and blue doves, made a brilliant 'bag.'

"The waters, too, abounded in fish, from the mullet up to the gigantic manatee, or sea-cow, which struggled under the harpoon like a whale of the fresh water. Then, in the bay, the Indians used to glide along in their canoes as softly as a wave, and transfix the sleeping turtle with their spears. They would also leister the paracoods, as they feed on a crispy sea-weed that grows like a fungus at the root of the mangrove tree. Sometimes they would shoot with poisoned arrows from the blowpipe, the large cavally and the gar-fish,† as they rose out of the water at the manchineel apples that overhung the sea, waiting for each wave to lift them towards the fruit-laden bough, and then springing from its crest."

In "The History of Caledonia, or the New Scots' Colony of Darien," Edinburgh, 1699, I find an enumeration of the birds seen in the woods by the settlers (p. 67).

"Their birds are the chicaly-chicaly, which makes a noise somewhat like a cuckoo, is a large bird, has feathers

* The paracood is an excellent fish at some seasons of the year; at others it is poisonous, and its only antidote is said to be its backbone burned, pulverised, and drank in *muslam*, a liquor made of the plantain.

† The gar-fish has a long sharp bony snout; it swims so fast and recklessly that it sometimes transpierces the natives' canoes with its proboscis.

of divers colours, very beautiful and lively, whereof the natives sometimes make aprons. This bird keeps mostly on the trees, feeds on fruit, and is pretty good meat. The quiam feeds in the same manner, his wings are thin, his tail dark and short, and upright. He is much preferable to the other for meat. There is a russet-coloured bird, resembling a partridge, runs fast on the ground, and is excellent meat. The coroson is a large fowl as big as a turkey, and of a black colour. The cock has a fine crown of yellow feathers on his head, and gills like a turkey. They live on trees and eat fruit. They sing very delightfully, and are so well imitated by the Indians that they discover their haunts by it. They are very good meat; but their bones make the dogs run mad, and are therefore hid from them by the Indians. They have abundance of parrots, for size and shape much like those of Jamaica; they are very good meat. Their parrakites are most of them green, and go in large flights by themselves. They have macaw birds, which are as big again as parrots, and resemble them in shape; they have a bill like a hawk, and a bristly tail, with two or three long straggling feathers, either red or blue; but those of the body are of a lively blue, green, and red. The Indians tame these birds and then let them go into the woods amongst the wild ones; they will return of their own accord to the houses. They exactly imitate the voices and singing of the Indians, and call the chicaly in its own note. It is one of the pleasantest birds in the world, and its flesh sweet and well tasted. They have also woodpeckers, which are pied like our magpies, and have claws that they climb up trees with; they are not pleasant to eat. They have plenty of dunghill fowls, resembling those of Europe, and their flesh and eggs as well tasted as ours. They have flying insects too, and among others bees, which form their hives on trees, and it is observed that they never sting anybody. The natives mix the honey with water and so drink it; but know not the use of the wax. They have shining flies, which in the night time resemble glow-worms."

THE TOWN BUILT.—"At length the holiday, as if by general consent, was ended, and the emigrants set themselves resolutely to work. The peninsula was first fortified, and sixty guns, brought from the ships, were mounted on the battlements. They then, with manful labour, cut a canal across the little isthmus, and rendered their peninsula an island. The heart and thought of home were in all they did. The new fort was called St. Andrews, and the surrounding region that it was to defend, received the name of Caledonia. Huts were hastily built of precious woods, that were there mere lumber; woods, that by European skill, produce rich dyes and drugs, and shine polished as the chief ornaments of palaces."—*Warburton*.

NEGLECT OF FUTURE PROVISION.—"While thus employed, the settlers were, of course, unable to attend to the cultivation of the land. But this gave them little concern, for the ships were supposed to contain provisions for many months to come; supplies were expected soon to follow them from Edinburgh, and, at all events, the West Indies abounded in all that man could desire for food."—*Warburton*.

VISIT TO THE INDIANS.—"Paterson," having previously despatched deputies to the nearest Spanish settlements to ask for welcome, "undertook a journey into the interior, in order to make treaties with the natives, and to obtain from them a righteous title to the land. He set out to seek the savage king of Darien, who lived among the hills, ten days journey from St. Andrews." On this journey went the writer of "A Letter describing Darien," London, 1699, which, indeed, appears to have been contributed by "Mr. Rose," in whose journal in the old oak chest, the greater portion of the passages I quote—as well as those which Mr. Warburton makes use of—appear.

"I shall further give you an account of our going up the country to their king, or chief captain, we marching from our fort with Captain Andreas, and other of their princes. We began our march toward their head place, where the

king resided, first through a small skirt of wood, and then over a bay almost three miles, or a league in length, and *after that we went about six or seven miles up a woody valley*, and we saw here and there some old plantations, and had a very good path to march in. Then we came to the side of a river, which in most places was dry, and built us houses, or rather huts, to lodge in.

"The Indians forbid us to lie upon the grass, for fear of venomous adders, which are very frequent in these places.

"Breaking some of the stones that lay in the river, we found them shine with sparks of gold ; these stones were driven down from the neighbouring mountains in time of floods.

The next day of our march we mounted *a very steep hill*, and on the other side, at the foot thereof, we rested *on the bank of a river*, which Captain Andreas told us, *ran into the South Sea*, being the same river on which the town of Santa Maria was situated. Hence we continued our march till about noon, and then ascended another mountain, far higher than the former; here we were often, and in many places, in great danger, the mountains being so high to a perpendicular, and the path so narrow, that but one man at a time could pass. *We arrived in the evening on the other side of the mountain*, and lodged *again by the side of the same river*.

"Next morning, we marched all along the river before-mentioned, crossing it often, almost at every half mile, sometimes *up to the knee*, and other times, *up to the middle*, in a very rapid current. About noon we came to a place where we found some Indian houses.

"They found," says the writer of "the Defence," "the country through which they passed of an exceedingly rich soil, but much covered with wood; only here and there they met with some places which the Indians called in their language 'savannahs,' where they plant their 'mari,' a kind of corn, something like wheat, upon little hillocks, at a little distance one from another. These savannahs are not level, but consist of small hills and valleys, with pleasant

spots of wood intermixed, which serve both for pleasure and profit, of which more hereafter.

“The Indians were so secure, that they saw several of them sleeping in hammocks tied to the trees, and had no other covering or canopy but large plantain leaves; for they were told by their priests, or rather magicians (who went a conjuring, which they called ‘panawing,’ as soon as our fleet arrived), that the people newly arrived would be a great assistance to them against the Spaniards, and would never molest them in any matter of religion, but live in good correspondence with them, if they failed not on their part.”

DESCRIPTION OF INTERIOR FROM CALEDONIA BAY, AND HABITS OF THE INDIANS.—“At first,” says Mr. Warburton, “Paterson found the country devoid of inhabitants, though it was pleasantly diversified with green savannahs” (level plains) “and cool forests, beneath whose shade he travelled for many miles. As the ambassadors proceeded, they found the country cultivated in the simple manner of the Indians. *Maize, bananas, cocoa-nuts, and pine-apples* were found in profusion. The dwellings of the native people were very slight, and only roofed with palmeta leaves; but they appeared to want for nothing that conduces to the simple luxuries of savage life. Among their *magnificent cedar forests* they passed a joyous and comparatively innocent existence, with merely enough of labour to fulfil man’s destiny of exertion. When the hour of rest from their light labours came, they lay down in *houses* made of cocoa fibre, and suspended from two boughs; and in these they rocked themselves, children of nature as they were, into calm and careless slumber. Paterson, who had made himself acquainted with their language, was everywhere received with kindness and attention. ‘After a splendid reception,’ in a lofty isolated grove, ‘from whose covert groups of beautiful women bounded forth, glittering with ornaments, and their heads wreathed with garlands of flowers,’ by the king, ‘a swarthy potentate, seated on a

characteristic throne of mahogany logs, which were covered partially with Spanish crimson cloth,' and who 'wore a diadem of gold, ten inches high, besides a light cotton robe,' and ear-rings, and more ornaments, a treaty was forthwith made and ratified. Full freedom was given to the Scots to settle in the land, and enjoy it. Between them and the native Dariens there was declared to be '*Peace, as long as rivers ran, and gold was found in Darien.*' "

FOOD OF THE INDIANS.—"Then a banquet was held in honour of the strangers. The flesh of the peccary (or wild pig), the fish from the mountain streams, and the fruit from the trees that over-arched them, found favour with the Scots; but when a huge lizard, called iguana in that country, was served up with tomata saucc, the ambassadors found their appetites not diplomatic enough to enjoy it. The reptile, however, was soon consumed by the royal family, and a dessert of figs, peaches, and bastard cinnamon soon replaced it. Three calabashes, filled with fruity drinks, cooled in the neighbouring springs, were handed round Minstrels all the while, seated on boughs overhead, sang the glories of the savage king, and women danced on the moonlit sward around the favoured guests.

"Other native chiefs pledged themselves to the alliance and support of the colony; and if the colonists had not been, for the most part, composed of the most unworthy and rebellious spirits, their savage allies would, doubtless, have remained faithful to the last. As it was, though wronged and disgusted, they were more constant in their friendship and services than most European nations would have been."*

Of the all-important subject, gold—for here they had got very nearly upon El Dorado, that Raleigh missed—we begin to catch a glimpse, as one of the parties to this expedition tells us in the letter describing Darien:—

"Captain Diego commands from the bottom of the Gulf of Uraba on this side to Caret Bay, and has about three

* Darien, by Eliot Warburton, vol. iii.^d

thousand men under his command. He is esteemed the most powerful amongst them, and has been at war with the Spaniards about a twelvemonth. The occasion was this—the Indians having found *three gold mines within his jurisdiction, being two small ones and a very great vein*, consulted with themselves what to do; and being sensible that they did not understand how to work them, concluded to discover them to the Spaniards, provided they would allow them such a share of the profit. This was agreed to and faithfully promised; but no sooner had the Indians shewed the mines, than they shut up two of them, put strong guards upon them, *and fell to work upon the third*, of which the Indians demanding their share, they beat and abused them, and threatened to exterminate them, which provoked them so, that a little time after they seized twenty Spaniards and three priests, and cut them all to pieces.

“Captain Ambrosio (an Indian), who has the adjoining command, forced them to enter into the common confederacy, and cut off ten Spaniards, who lived on the main of the Golden Island. I distinguish it thus, by reason the natives call all the main opposite to our island by the same name that it bears. *About a league from the water-side there is a high mountain, wherein they assure us are several mines of excellent gold.* The Spaniards are very sensible of this, and from time to time have taken great care, by fair or foul means, never to let them be opened, well knowing that (being so near the North Sea) they should have the least share of them to themselves.

“Captain Pombigo, of Caret Bay, told us of several *gold mines within ten miles* of us, and shewed us a sample of the gold, which was extraordinary fine.”

DISSENSIONS IN THE COLONY.—“When Paterson returned to St. Andrew's, after only six days' absence, he found an alarming change in the colony. A spirit of discontent and mutiny had broken out. The men who worked hard at the new city were dissatisfied that others should remain idle and unpunished. There was, as yet, no law in

the colony. Many of the colonists were men who had escaped from the consequence of crime in their own country, and all their evil passions now broke out, ripened by the warm climate, by long idleness, and by the absence of all settled, acknowledged government. Then it was found necessary to make laws, but none would submit to a supreme chief.

"The Presbyterian ministers preached three times a day to no avail."—*Warburton's Darien*, vol. iii.

I find an account of this in a letter in the collection in the Advocate's Library, from Adam Cleghorn to Baillie Blackwood, August 14th, New York, 1699. Sent per Newfoundland.

"I am informed also that there was some divisions among y^e first-elected Councillors, some of them being too hote headed, and oy^r of y^m no wayes train'd up to soe great affaires, their agreement on this head was not soe greatt as was requisite. Many young men of them being swelled w^t the expectationes of their future and present preferments, forgett all oy^r things but some punctilios of honour, which was alltogether extrinsick to the great trust committed to them. And Mr. William Paterson, who has this generall applause, that he was commandin this affaire to the outermost degree of diligence, was very uneasy w^t these young gentlemen's misbehaviours. The tragicall period of our Scotts' African affaires, 'which can never be replaced,' exclaims the worthy merchant, 'excepting only the *Rising Sun* be arrived at Darien, and keept possession of the place until further reinforcements be made.'"

FAMINE.—"Provisions began to fall short, and, to their grievous disappointment, the emigrants soon found that more than half the meat and biscuits were so bad that they were obliged to be cast into the sea. Famine now threatened the infant colony. Disappointment began to tell upon them. They had been four months in the promised land, and as yet had seen no gold. . . . They had expected, like the conquering Spaniards, at once to seize upon the

country's wealth. Paterson's humane conciliation of the natives was objected to—"murmur and mutiny began to break out" Want began to be severely felt. The labourers were unable to work on their short allowance of food—starvation stared the colony in the face. They had exhausted all the neighbourhood of game, and it might be long before their ship returned from Jamaica."

THE INDIANS COME TO THEIR ASSISTANCE.—"Then it was that the humane policy of Paterson was rewarded. The King of Darien sent a large body of Indian hunters to the assistance of the white men. Their knowledge of the country, and experience, enabled them to procure game and fish where the Scotchmen had ceased to find it. The friendly natives encamped in the neighbourhood of *their protégés*, and were indefatigable in their service."

ANARCHY.—"To such an extent did anarchy prevail, that the very mutineers at length proposed to elect a president; but their jealousy limited his rule to one week's duration. It followed, that all those pretending to any influence, hated their fellows; each president occupied his week in undoing the work of his predecessor. Hence, the work of defence advanced but slowly; cultivation of the soil was neglected; the scanty supplies were unjustly doled out; some of the sturdiest labourers were half starved, because unpopular with the sea-captains. To crown all, THE PREACHERS' FANATICISM, who considered themselves the chiefs of a theocracy, inflamed the minds of those who listened, with uncharitableness, and denounced, in awful language, all those who turned a deaf ear to them.

"These infatuated men insisted on the whole colony attending their service for six hours on every Sunday, hemmed up in a dark and narrow building, called a chapel, the best of which sent many to their graves, and filled the hospital. Even on week days, they required all those who called themselves Christians, to listen to their 'out-pourings' for three mortal hours—mortal often in more senses than one.

"Thus ambition, ignorance, and selfishness, with their

concomitants, mutiny and discontent, contrived to destroy the infant colony. Amongst all those combustible ingredients, was finally flung the torch of fanaticism; and thus the destruction, which neither English King nor Parliament could have effected, was rendered inevitable."

DISEASE AND DEATH.—"Every day the little band of adventurers was reduced: the men who were still able to work, strove faintly to complete the fortifications, and to till the ground for crops, which they were destined not to reap. Many of these pale and worn, but still resolute labourers, passed rapidly from the trenches to the crowded hospital, and thence, still more hurriedly, to their graves. Already, the burial ground was better tenanted than the fort."

BAD TIDINGS.—"At length, the long expected ship returned from Jamaica; she brought the astounding intelligence of King's William's edict against the Scottish colony, already struggling with every ill that affects brave men. That monarch, having first approved of and encouraged the expedition, had the unparalleled cruelty to condemn it to destruction. On the remonstrance of the meanly jealous English Parliament, the King sent an order (dated on Sunday, which still more shocked its victims) to all the English colonies in America and the West Indian Islands, forbidding them, on any pretence whatever, to supply either provisions or other stores to the Scottish colony at Darien. Yet he knew there was elsewhere no sustenance to be obtained by them on their side the Atlantic. These orders were acted upon to the very letter; and the necessities of life that were freely granted to the buccaneers, the enemies of mankind, was withheld from the gallant and loyal Scots now perishing at Darien. The news of this edict filled the doomed colonists with despair."—*Warburton's Darien*, vol.iii.

This edict was as follows:—

“By the Honourable Sir William Beeston, Kt., His Majesty’s Lieutenant-Governor and Commandant-in-Chief in and over this his Island of Jamaica, and over the territories depending thereon in America, and Vice-Admiral of the same.

“ A PROCLAMATION,

“ Whereas I have received commands from His Majesty, by the Right Honourable James Surman, Esq., one of His Majesty’s principal Secretaries of State, signifying to me that His Majesty is unacquainted with the intentions and designs of the Scots’ settling at Darien; and that it is contrary to the peace entered into with His Majesty’s allies, and therefore has commanded me that no assistance be given them. These are therefore, in His Majesty’s name and by command, strictly to command His Majesty’s subjects, whatsoever, they do not presume, on any pretence whatsoever, to hold any correspondence with the said Scots, nor to give them any assistance of arms, ammunition, provisions, or any other necessaries whatsoever, either by themselves or any other for them; or by any of their vessels, or of the English nation, as they will answer the contempt of His Majesty’s command to the contrary at their peril. Given under my hand and seal of arms this 8th day of April, 1699, and in the eleventh year of our Sovereign Lord William the Third of England, Scotland, France, and Ireland, King, and of Jamaica, Lord Defender of the Faith, etc.

“ WILLIAM BEESTON.”

A similar proclamation was issued by R. Grey, Governor of Barbadoes, and the like by Lord Bellorant, Governor of New York.

The above is from “ A full and exact collection of all the considerable addresses, memorials, petitions, answers, proclamations, letters, and other public matters relating to the company of Scotland trading to Africa and the Indies from 1695 to 1699. Printed in 1700.”

DISEASE.—“Amid such scenes even the stout Scottish hearts began to fail Misery is the sharpest ally of pestilence. When the soul sinks, the poor clay that encloses it will soon also yield. The fort of St. Andrew's became one great infirmary.”

NEW HOPES.—“Paterson, alone, sustained by unquenchable hope, preserved a calm and serene dignity among these sorrows. He knew that a ship with stores and provisions should soon arrive from Scotland; he knew that the climate would be changed by cultivation; that hardships would be obviated by better shelter.”

NEW DISAPPOINTMENT.—“The expected vessel did not arrive; she had foundered on her way; two of the Darien vessels had already been despatched to England. There were not healthy men enough to man the rest.

“The burying-ground was the only part of the settlement that thrived. Even when the fine season set in—and a finer season is not seen on earth—the heavens seemed only to smile in mockery of all hope. The ghastly remnant of the Scottish settlers were unable to work, and passed the day in dreary languor; and only roused themselves to exertion when their miserable pittance of bad food was doled out amongst them.”

* * * *

THE DEPARTURE.—“At length they resolved to depart from the fatal soil The remnant of the stores, and the pitiable relics of provisions cleared out, with such fresh fruits as the early season yielded, were put on board. The helpless emigrants had not wherewithal to take them to Europe; the West Indian Isles were closed against them either by the Spaniards or by William's barbarous decree. They fixed their destination for New York. Paterson was the last to leave the shore.”

* * * *

THE VOYAGE HOME.—“Even the wind, with all other aid, seemed to fail them, for they lay in a waveless calm for days close to the fatal shores of Darien. The fatality pur-

sued them still, and many a wan and wasted form lay gasping in the sultry air, which poisoned the lungs that drank it in. The ships, with one exception, reached Charlestown, in North America; thence, after long delay, about *thirty* of the emigrants returned to Scotland, the sole remnant of 1,200 lusty adventurers, who, burning with high hope, had left their country twelve months before. The fatal truth concerning Darien soon spread throughout Scotland; the nation reeled under the blow; every family suffered in the great calamity. Their scanty wealth had perished, as well as those for whom it had been first hoarded, then expended.”—*Warburton's Darien*, vol. iii.

The news reached Scotland in the following letters to the Company; they are in the chest of the Darien Papers in the Advocate's Library:—

“The reason of their comeing away, Captain Drummond advises, was want of provisions and liquors, being forced to eat yams, etc., which broght sickness amongst y^m, that had not healthfull people to watch and ward, and dyeing 10 or 12 in a day, *not through any unhealthfulnesse of the climate*, but meerly want of wholesome dyet and liquors; the *climate is acknowledged* to be healthfull by y^e generality of all y^e persons come from thence as doe understand. You now see the effects of the prohibitions published in all y^e plantations, it may be reckoned the intended effects. Mr. Paterson, at New York, is in a worse condition as to health; had a line from him last post.”—*Letter of Mr. Balard to Mr. Mackay, Boston, 7th September, 1699*. It adds “that Mr. Paterson *has* lost his senses, and does not meddle with anything.” Again, “Meantime the grief has broken Mr. Paterson's heart and brains, and now hee's a child; they may doe what they will for him.”

In a letter from Adam Cleghorn to Baillie Blackwood, dated August 14th, New York, 1699, sent per *Newfoundland* (Bannatyne Papers, 147), the writer, in giving an account of the miserable condition of the colonists who returned on board the *Caledonian*, says—“The cause of

their leaving Darien was, as they say, for want of provisions and fresh supplies from Scotland. Besides," they add, that "they never had soe much as one letter or scratch of a penn from the Company all the tyme they were a standing colony. Thus, despairing of supplies, and a great sickness and mortality befalling their men, they thought fit ray^r to commit ymselves to the mercy of the seas with their remaining provisions, than to dye upon the spott without hope. *This sickness was no wayes occationed by the unhealthiness of the climate, which all of y^m say was very wholesome, only mere want starved y^m out of the place.*"

ONCE MORE.—"Paterson had scarcely landed in Scotland when he hastened to the Council, to account for the defeat of the expedition, and to counsel them to new enterprises. Once more his sanguine spirit communicated itself to the Company. They prepared a new expedition, and made a new appeal to the justice of King William."

NEW PROPOSALS.—"Paterson now proposed that the Company should assume an English character, two-thirds of its members to belong to that nation, and one-third only to Scotland. *He wrote an eloquent letter in praise of the spot that had been so fatal to his happiness, and laid down plans for the conduct of the future colony in the most lucid and statesman-like language. He based all his hopes on that freedom of trade and freedom of commerce, which was only destined to obtain a consummation in later times.*"—*Warburton's Darien.*

A portion of these "proposals" ran as follows:—

"Darien lies between the golden regions of Mexico and Peru; it is within six weeks' sail of Europe, India, and China; it is in the heart of the West Indies, close to the rising colonies of North America. The expense and danger of navigation to Japan, the Spice Islands, and all the Eastern world, will be lessened one-half; the consumption of European commodities and manufactures will soon be doubled. Trade will increase trade; money will beget

money; and the trading world will need no more to want work for its hands, but hands for its work.

“Darien possesses great tracts of country as yet unclaimed by any Europeans. The Indians, original proprietors of the soil, will welcome to their fertile shores the honest honourable settler. Their soil is rich to a fault, producing spontaneously the most delicious fruits, and requiring the hand of labour to chasten rather than to stimulate its capabilities. Their crystal rivers sparkle over sands of gold; there the traveller may wander for days under a natural canopy formed by the fruit-laden branches of trees, whose wood is of inestimable value. The very waters abound in wealth; innumerable shoals of fish disport themselves among coral rocks, and the bottom of the sea is strewn with pearls. From the first dawn of creation this enchanted land had lain secluded from mortal eyes; to the present generation, to Scottish enterprise it was now revealed; let us enter and take possession of the promised land. There a new city, a new Edinburgh, shall arise; the Alexandria of old, which was seated in a barren Isthmus, and grew suddenly into prodigious wealth and power, by the mere commerce of Arabia and Ind, shall soon yield in fame to the new EMPORIUM OF THE WORLD.”

THE PROPOSALS REJECTED.—“Lord Basil Hamilton was requested to lay this new proposal and petition before the king. That high-hearted and young nobleman accepted the unpopular mission, though he had always held aloof from the court since the revolution. He repaired at once to London; an audience was refused him, but his zeal was not to be extinguished by the cold ceremony that surrounds a throne. He had the wrongs of his country committed to his charge, and at the risk of the then easy persecution for treason, he was determined to acquit himself of the task. He watched the going out and the coming in of the magnanimous but politic king. At length he caught his eye; he pressed forward through the crowd of courtiers as William was mounting his horse; he laid the petition on his saddle

bow; the king's eagle-eyes flashed fire, and his stern brow was fiercely bent.

"Now, by heaven, this young man is too bold," he exclaimed wrathfully; but the same moment his noble nature reminded him how he had himself risked all things for what he considered to be his country's cause, and his royal brow relaxed; "That is to say," he added with almost a gracious smile, "if a man *can* be too bold in the service of his country."

But with these words all magnanimity appeared to cease. He rode on; and thenceforth his countenance towards the Scottish scheme was as cold as ever.

So great was the interest excited throughout Scotland, so numerous the petitions from shires and burghs, that the king found himself compelled (1699) to issue "a proclamation against petitioning," which, and the reasons assigned for it, will be found in "the collection of papers" above quoted.

THE LAST EFFORTS.—Again the Scots sent forth a colony as ill-officered and ill-ministered as before. Fanaticism assisted all other baleful agencies in counteracting the bold design; again a reinforcement was sent out under the conduct of the gallant Campbell of Finab. He withstood the Spaniards, but he was conquered at length by circumstances. Pestilence and famine once more invaded the colony. Besieged by the Spaniards, they were at length forced to capitulate, with all the honours of war. So weak were they as they departed, that their brave enemies were obliged to heave up their anchors for them, and to set their sails.

THE ABANDONMENT.—Thus Darien was abandoned, and with it the noblest scheme of civilisation that was ever planned.

We are told by historians, that the indignation of the Scots remained fervent and enduring. Their indignation would not be pacified; nor in the reign of William's

successor would they consent to the union, until full compensation had been made to the Scots Company.

Chambers, of Edinburgh, in an article on the Darien scheme in his "Speculative Manias," says:—"It was long before the Scotch forgot or forgave the ruin of their favourite project. At the union of the two kingdoms in 1707, some compensation was made to the losers by government, not nearly sufficient, however, to cover the national losses; and for more than eighty years the memory of William's conduct in the Darien Scheme rankled in the heart of the Scotch. Besides impeding the union itself, it contributed greatly to strengthen the Jacobite feeling which broke out in the rebellions of 1715 and 1745. Even so late as the year 1788, when some gentlemen in Edinburgh proposed to erect a monument to commemorate King William and the Revolution of 1688, the affair was remembered, and an anonymous letter, which appeared in the newspapers, proposing that the site of the intended monument should be the valley of Glencoe, and that there should be executed on one side of the base a representation in relievo of the massacre, and on the other a view of the Scottish colony on the Isthmus of Darien, produced such an impression that the gentlemen were obliged to abandon their scheme."

Queen Anne, in 1702, soon after her accession, recognised the Company in a royal letter, and was graciously pleased "to regret our Company's said losses and disappointments as being a great prejudice and loss to the whole kingdom," and promised to concur cheerfully in anything that could be reasonably proposed for the Company's reparation and assistance.

By the 15th Article of the Union, the sum of £398,085 10s., was to be advanced by England as compensation.

THE REPARATION.—"Years rolled on," says Warburton, "and the wrongs of Scotland, at length, made themselves heard. A compensation for the sufferers by England's

policy in the Darien scheme, was decreed. Paterson, alone, obtained no share in the tardy justice."

Sir John Dalrymple writes—"After the Union, he claimed reparation for his losses from the equivalent money given by the English to the Darien Company, but got nothing, because," he adds bitterly, "a grant to him from a public fund, would have been only an act of honesty, and not a political job."

I have been fortunately enabled to find, in the British Museum, a pamphlet entitled, "Paterson's Amendment," which concludes as follows:—

PATERSON'S AMENDMENT.—"Upon consideration of the whole matter, the Committee come to the following resolutions:—

"Resolved, That the petitioner, William Paterson, Esq., hath been at great expence and pains, and sustained considerable losses in the service of the late African and Indian Company of Scotland, and ought to be remembered, and have a recompense for the same.

"Resolved, That the sum of £18,421 10s. 10½d. ought to be conveyed and made good to the petitioner."

The note appended, says—"Agreed to by the House, the 10th of July, 1713."

I find, however, in an article in the "Retrospective Review" for this month (February), that he did not get the money, as "this bill was thrown out in the House of Lords, upon no grounds that are intelligible at the present day."

Sir John Sinclair tells us, that Paterson subsequently represented the district of Burghs, in his native country, in the House of Commons.

MEMOIRS OF DARIEN.—I shall now proceed to give the substance of the "Memoirs of Darien," Glasgow, 1715, an exceedingly rare book (not to be found in the British Museum), which contains the most precise detail I have met with of the proceedings of the colony, and of the several successive expeditions which went out from Scot-

land; the author was one of the Presbyterian ministers (either Alexander Dalgleish, or Archibald Stobo), who went out with the third expedition in the *Rising Sun*. First fortifying himself for his work by a few quotations from Job, Jeremiah, and the elder prophets, he proceeds to narrate, in a clear and precise manner, the progress of events and the causes of failure, and concludes with thanksgivings for his escape (in which the reader will join), and further quotations from Job, etc.

FIRST EXPEDITION.—"Soon after their arrival," which was on 2nd November, 1698, "the chief Indians here being friendly to them, welcomed them to settle in the country, and consented to a grant unto them of that Place and Lands adjacent, our Counsellors satisfying them therefore to their full content."

The author proceeds to relate, that Captain Pincarton, on his passage from Caledonia to Carthagena to seek provisions, got wrecked, and was made prisoner by the Spaniards; but afterwards "released upon the capitulation made with the Spaniards, March 31, 1700." He then details a slight skirmish with Spaniards, near the settlement.

"All the time of their abode here, which was upwards of seven months, they say they never had so much as one letter or vessel from Scotland, which was a great discouragement to them, and no good Politick in our Directors at home; and it was an awfull frown upon this Design, the Shipwrack of that vessel which was sent from the Clyde, about January 1699, in order to go for the Colony, and its miscarrying in the undertaking."

ITS FAILURE, AND WHY IT FAILED.—"On the 20th day of June, 1699, they all dislodged and left Darien." The causes of the failure of the colony he states to be, scarcity and want of provisions, sickness, the king's proclamation prohibiting trade, alarms of preparations by the Spaniards to dislodge them, the number of heads, a selfish spirit, and the seeking of private interests, jealousies and

dissensions among themselves, and "jarrings, divisions, bitterness, and misunderstandings among the counsellors and leading men."

"When they took farewell and sailed from Darien, they were in all four ships together, viz., the Caledonia, the St. Andrew, the Unicorn, and a Fink"; the latter became leaky, and had to be abandoned; the St. Andrew (Captain Pennycook) got to Jamaica, having lost one hundred men on the passage, whilst the Caledonia and Unicorn got to New York, with the loss of three hundred men at sea; finally the Caledonia reached Scotland.

"This desertion did lay the ground of the miscarriage and defeating of whatever following recruits and supplies the Company of Scotland sent unto this place."

SECOND EXPEDITION—A SHIP ON FIRE.—"Eight weeks after" their departure from Darien, "there arrived two ships from Scotland upon the place thus forsaken, with Recruits of men and provisions for the Colony, which were Captain Jamison and Captain Stark, with over 300 men. . . . "Within a few days after their arrival, Captain Jamison's ship being loaded with Provisions and Brandie, while some were drawing Brandie in the Hould of the ship, having a lighted candle with them, accidentally the fire of the candle caught hold of the Brandie, which forthwith flamed so terribly that it set the ship on fire, and in a little time destroyed both ship and provisions."

This second expedition was then obliged to abandon the place, and sail for Jamaica in Captain Stark's ship, all the provisions having been on board Jamison's vessel. Six only of the party determined to remain behind and live with the Indians; and these men were subsequently found by the next expedition in good health and spirits, having been most hospitably treated by the Indians.

IMMORALITY OF THE COLONISTS.—The author then gives a most gloomy account of the sadly immoral and profane character of the colonists, and calls them "a sad reproach to the nation."

"When the Rising Sun and her party came up, they found the first colony, and Jamison's and Stark's party, removed and gone; and they never knew of it until they got thither. When Captain Baillie, with a small vessel, arrived there from Scotland, though they found the Rising Sun's party upon the place, yet the capitulation with the Spaniards was concluded near two days before his arrival. When Captain M^c Dowall, in a ship from Dundee, had come to Caledonia with provisions, he found the place possessed by the Spaniards, our men having removed to Jamaica."

These results of bungling mismanagement, and want of concerted arrangement on the part of the Company, the author attributes to Divine wrath, and *improves* them by a long sermon, plentifully interlarded with texts of scripture.

THIRD EXPEDITION.—"The next adventurers for Caledonia were the Rising Sun and her party" [whom the author accompanied], "who had no better success in the expedition than their countrymen who went before them. They were in all four ships: the Rising Sun, Captain Gibson commander; the Companies' Hope, Captain Miller; the Hamilton, Captain Duncan; and the Hope of Burroughstoness, Captain Dalling. They had in all about 1,200 men aboard their several bottoms."

PASSAGE OUT.—"At length the wind presenting fair, we all set sail together from Rothesay, in Boot [Bute], on September the 24th, 1699, being the Lord's Day."

EFFECTS OF THE KING'S PROCLAMATION.—"But the Governour of Montserrat was so inhuman, that he denied us the liberty of having any water or provisions there, pretending his orders from the Court of England for so doing. Here our counsellors heard some flying reports about the desertion of our colony, but they would not believe it."

ARRIVAL.—"All arrived safe in Caledonia Bay on the 30th of November." On their *passage out*, one hundred and sixty persons, amongst whom was Mr. Alexander Dalgleish, one of the ministers, died. This excessive mortality

must have arisen from close crowding and bad provisions. Upon their arrival, they found the place abandoned; but Captain Thomas Drummond, from New York, and Mr. Fulton, from New England, had just arrived in the bay with two sloops and some provisions.

SHORT ALLOWANCE, MUTINY, AND AN EXECUTION.—On account of the shortness of provisions, it was decided to send five hundred men in the two sloops to Jamaica, "so that the number being fewer, the provisions might last the longer," and to put the remainder on short allowance, which caused much grumbling and discontent, and finally a mutiny, which was suppressed by the execution of Alexander Campbell on the 20th of December.

PRESBYTERY OF CALEDONIA.—The author gives a copy of a document, drawn up on the 19th of July, 1699, by the Commissioner of the General Assembly at Glasgow, appointing Alexander Shields, Minister of the Gospel at St. Andrew; Francis Borland, Minister of the Gospel at Glasfoord; Alexander Dalgleish, and Archibald Stobo, as the Presbytery of Caledonia. This document is signed by George Hamilton, Moderator, and James Bannatyne, Cler. Syn. Nat. and Comm'.

SOLEMN THANKSGIVING.—In consequence of the great sufferings of the colonists, "the 3rd of January, 1700, was set apart for solemn thanksgiving, prayer, and humiliation," as stated in the report to the Moderator of the General Assembly, drawn up "at a conference of the ministers aboard the ship, the Hope of Burroughstonsess, Dec. 5, 1699." In this report, the colonists are accused of the most profligate and immoral conduct.

The people were chiefly employed in building huts and store-houses, and bringing great guns on shore for the defence of the place: the ministers complain greatly that they had no huts to reside in, that their commanders were "uncomfortable," and that the people would not come to hear them preach.

CAPTAIN DRUMMOND IMPRISONED.—The next occur-

rence recorded, by the author is, that Captain Drummond, having been suspected of ill conduct in the first colony, was, after an investigation, kept prisoner on board Captain Duncan's ship until the arrival of Captain Campbell, of Finab.

Then follows a letter on the state of irreligion in the colony, from Shields, Borland, and Stobo, to the Moderator of the Commission of the General Assembly of Scotland, dated "from the Woods of Caledonia, Feb. 2, 1700."

"The government and management of affairs of this colony was in the hands of four Commissioners, Captain Gibson, James Byars, Captain Veatch, and Major Lindsay."

CAPTAIN CAMPBELL, OF FINAB, ARRIVES.—"On the 11th of February, arrived here, in a sloop from Barbadoes, Captain Campbell, of Finab, having orders from our Directors at home to be one of our Counsellors."

SPANISH HOSTILITIES.—On the 13th of February they received intelligence of hostile movements on the part of the Spaniards.

THEY GO INTO ACTION.—February 15. A skirmish took place at Yaratuba, about twenty miles S.W. of the fort. Several spies came to the settlement on pretence of selling tortoise-shell and provisions; the colonists commenced erecting batteries.

Between the 23rd and 25th of February, eleven sail of Spanish vessels anchored in the bay, and the Spaniards came over land with negroes, mulattos, and Indians, from Panama and Santa Maria, under the command of General Don Juan Pimienta: some skirmishes occurred, in one of which Captain McIntosh was killed. After this, "the Spanish general sent a drummer with a demand or challenge to our Counsellors, which our men, for want of an interpreter, did not well understand, but declared that they were gentlemen of honour, and would, to their utmost, defend themselves and the place."

THEY WON'T SURRENDER.—Captain Ker was then sent to treat with the Spanish general about articles of

1760

capitulation, but "the treaty broke up without effect on the 22nd March"; and the Spaniards hemmed them in on all sides.

CAPITULATION.—On the 28th and 29th the Spaniards opened fire from the woods, and cut them off from their watering place. Spoiled provisions, bad water, and sickness, were fast reducing the colony, when, "on the 30th and 31st March, General Don Pimienta himself offered to capitulate with our Counsellors, all of whom agreed except Captain Campbell, of Finab, who was always against any treating with the Spaniards otherwise than by the sword."

"The Articles of Capitulation agreed upon between His Excellency Don John Pimienta, Captain of His Catholic Majesty's Forces both by sea and land, and Governor of Carthagena, and the Commissioners of Fort St. Andrew, in the Bay of Caledonia, about the surrendering of the said Fort St. Andrew, March 31, 1700," were drawn up in Latin by Mr. James Main, and are subscribed by Pimienta, Gibson, and Veatch, Captain Lindsay having died, and Byars having gone to Jamaica.

A STRONG SMELL OF GUNPOWDER.—Here the author thinks it necessary to vindicate the honour of the colonists, and to give the reasons which decided them to surrender; from which it appears, that famine, rotten provisions, putrid water, sickness and mortality, internal dissensions, a fleet of eleven armed Spanish vessels in the harbour, and an army of Spanish negroes, mulattos, and Indians hemming them in on all sides by land, were not the immediate and sufficing inducements, but "*the want of bullets,*" the officers having melted up all the pewter vessels, and "*the dampness of the gunpowder.*" Surely the author, for a religious professor, was of a strangely pugnacious temperament.

DEPARTURE FROM DARIEN.—11th April, 1700. All the survivors, having been most generously treated by the Spaniards, "embarked and sailed next day; the four ships that came from Scotland, Baillie's vessel, Captain Campbell's sloop, and an old sloop."

SHIP FEVER.—On the passage “they were sadly crowded together, like so many hogs in a sty, or sheep in a fold, so that their breath and noisome smell infected and poisoned one another . . . their best food was a little spoiled oatmeal and water,” so that great mortality ensued.

AUTHOR ARRIVES IN SCOTLAND SAFE AND SOUND, BUT WITH A CAUTION NOT TO GO AGAIN.—On the 7th of May, they arrived at Blewfields, Jamaica, whence the author, with the more fortunate, made his way home to Glasgow, and subsequently wrote his exceedingly interesting book. And now I shall take leave of his reverence, and of the subject.

VII.

TRANSLATIONS OF DOCUMENTS, RELATING TO
DARIEN, EXISTING IN THE ARCHIVES OF
BOGOTA.

No. 1.

OFFICIAL REPORT OF THE ABANDONMENT OF FUERTE
DEL PRINCIPE.

*To His Excellency the Viceroy and Captain-General
of those Kingdoms.*

The Governor of Panama acknowledges the receipt of the order in which your Excellency commanded the establishment of Principe to be demolished: he also relates the mode in which the evacuation of that post was effected.

Most excellent Sir,—I have deferred answering your Excellency's dispatch of the 23rd of July, upon the destruction of the establishment of Principe of Darien, until it had been accomplished by the Governor, *ad interim*, of that province, Don Francisco de Ayala, with the view to save your Excellency the trouble of two dispatches on the same subject; I now reply, and enclose the adjoined dispatch, in which that officer reports the withdrawal of the troops, inhabitants, and everything that existed in that post. The militiamen who served in that province have returned to their homes, and there only remain in it 150 men in garrison, composed of two light companies of forty men each, and a stationary company of Natives of the province, according to your Excellency's instructions. The only thing wanting is the construction of a fort on the Island of Boca Grande, and two boats to cruise off it and Chiman. That town does not belong to the government of Darien, being in mine; wherefore I have withdrawn from Ayala 50 men of the 200 that your Excellency appointed for his force, upon the supposition that Chiman .

was dependant on Darien and not on Panama; and upon this reduction has resulted another of 13 soldiers, the 37 which that town now has, being sufficient for its defence.

This is all I have to communicate to your Excellency on the subject, and I wait to obey your further orders. God keep your Excellency many years.

JOSEPH DOMAS Y VALLEZ.

Panama, 27th Oct., 1790.

No. 2.

OFFICIAL REPORT OF MILLA'S JOURNEY IN MARCH, 1788.

[Translation].

Diary and Relation of the Route that I followed in crossing the Isthmus of Darien, from North to South.

Sunday, the 2nd of the present month, I left Carolina, at six, a.m, accompanied by the Indian Suspani, Captain of the village of Sucubti, and two of his comrades, with the linguist, Pius the fifth, commencing the journey by following up the waters of the Aglatomate, with many and repeated crossings, until we arrived close to the Cordillera, where the Indians of Chueta have a small house, which is the same as that mentioned in my first despatch of the 22nd of January, and serves as a hostelry to the above-mentioned Indians, and those of Sucubti, who are the usual traders to Carolina, by this road. From Carolina to this place, the distance is two and a half leagues, little more or less; upon arriving at a place they call the two mouths, it is necessary to follow that on the right hand, which, in the dry season, is quite dried up, and the better to know this place, one will meet an Indian shed covered with plantain leaves, and at a little distance from this, in the line of the Cordillera, will be seen a smaller hill than those to the right; up to this

there will be found water in this branch of the river, which has in some places a bottom of sand, and in others of shells, whilst higher up there are stones and pebbles. Taking care, after recognising those marks, to keep to the right of the river, the path or trail leading to the above-mentioned hostelry, which is from sixteen to twenty yards from the river, will be found; from thence the road over the Cordillera, from north and south, cannot be missed, since, after crossing three or four small rivulets, or rather, crossing the same one three or four times, with a little care a broken bank will be found on the right hand; this is where the path over the Cordillera commences, and it is as wide and trodden as if it were made by our people (Spaniards); the whole ascent is rather steep, and half way up a fallen trunk of a tree stops the path. From this place may be seen the Sea, and Carolina.

Following the path to the right, and avoiding that on the left which leads to Chueti, the mountain is crossed; the descent of which, on the other side, is more gradual and sloping; at its foot the river Forti unites with the Sucubti. Following the Sucubti down, to the south, after two or three hours of a good road, a plain ground and a very small hut will be found; in half an hour another, both on the right hand; and in other hour a third, on the left hand side. A quarter of a league lower down on the left hand will be met another, larger than the rest, which is that of Ignacio, the elder brother of Urruchurchu, and the same in which they received me when I started on my first journey in January. In this house I stopped to rest, having arrived about two o' clock in the evening; and after resting awhile, I proceeded by a road which is at the back of it; and ascending a mountain, the path over which cannot be missed, it is so beaten, I descended again to the river, which has here many rocks. Taking care not to lose sight of the river, there will be seen—first, an Indian hut, then another. and then the village of Sucubti, where Urruchurchu lives. This village consists of six houses

together, those above-mentioned, and two or three lower down ; and it may have about 30 Indians capable of bearing arms, a few more women, and sixty children.

Monday, the 3d.—I stopped at this village all day, as Urruchurchu was making preparations for the continuance of our journey.

Tuesday, the 4th.—I started at daybreak, accompanied by the captain and two of his Indians, and followed down the river over *level ground* and through an *open forest* ; and about 10 A.M., after having proceeded about two leagues, we left the river altogether, following a path to the left. All the rest of this day we walked through a forest exceedingly level and open ; here the Indians of Sucubti hunt, on account of the abundance of all kinds of game—at about 5½ P.M., we halted at a rivulet which had scarcely water enough to satisfy our thirst.

Wednesday, the 5th.—We pursued our journey through the same forest, and at ten o'clock we again fell in with the Sucubti at the place where the Indians attacked the Lieutenant of the Stationary Battalion of Panama, and wounded his guide.

As soon as we arrived at this place, Urruchurchu told me, that we could not proceed until some Indians should come with their canoes, to carry us down a short distance *to the road that the Spaniards had opened.**

We were waiting for those canoes until Thursday, the 6th, when four arrived with eight Indians, who, as I understood, were allied with the rebel Chucunas ; and I found they were not of those who had entered into the peace with us, but were always watching to attack any of our people, who might stray into the bush from the establishment of Port Principe.

The above-mentioned Indians put many questions to me, all full of malignity, and expressed themselves opposed to the opening of the road—saying, that they would not allow

* This was Arisa's road.

troops to march through their territory, and that, as for the communication we desired with Puerto Principe, it would be sufficient that they themselves should carry our despatches, and anything else we wanted ; and that they wished to be at peace with us, but on condition that we should keep in our country, and they in theirs ; to all which I assented, in order that they might let me continue my journey ; whereupon they were satisfied, and Urruchurchu made them a present of some yards of stuff that your Excellency gave him in Carthagena, and that he prudently brought with him for the purpose. This day at 10 A.M., we embarked on the river, and about two leagues lower down, we halted, at the *road* that they call *Arisa's*.

Friday the 7th.—At daybreak we proceeded along the road opened by the Spaniards, and after three hours' walk we crossed the Chucuna river by a bridge, and arrived at the island where Don Luis de la Carrera was encamped ; here we found tracks and lately erected sheds (*rancherias*) of the Chucunas, whereat Urruchurchu became alarmed ; and to conduct me the more safely, he went before with the other Indians, I following a good distance behind, until we passed the other branch of this river, lately named La Paz (Peace river).

At this place the other Indians left us, considering us out of danger, but, notwithstanding, taking the precaution to efface the footsteps that I left in the sand, and to warn us not to return by the same way, lest we might fall in with the Chucunas. I proceeded then with Urruchurchu, and about five in the evening had the felicity to arrive at Puerto Principe, where the said Suspani (*alias* Urruchurchu) advised that we should return by the river Savanas,* Chucunaqua and Jubganti, coming out at the village of Chueti, a short day's distance from Carolina, which plan appeared the best to Don Andres de Arisa, who considered it attentively.

* This is the only place in which I have ever seen the river Savana named.

The 10th.—I proceeded on my return back by the route above mentioned, and was two days on my way to Yavisa, as we only went when the tide permitted. In this town I stopped all the 12th to get ready a canoe to continue my journey, and at nine o'clock at night we started, but having informed Urruchurchu that the governor had written to me to say that two Indians had come close to Puerto Principe in pursuit of me, he became much troubled and said that those were Chucunas who were tracking us, and that he was sure that when they saw we did not return the way we had come, they were so malignant they would go to meet us at the mouth of Jubganti; upon this, foreseeing the danger, I determined to go back and send Captain Suspani to Carolina with the dispatches that I carried, which arrangement satisfied him, as he did not wish that any misfortune should occur to one of us, lest the blame might be thrown upon him, notwithstanding his good intentions.

MANUEL DE MILLA SANTA ELLA.

Yavisa, 13th March, 1788.

To His Excellency the Viceroy, Don Antonio Caballero y Gongora.

The 2nd Commandant General of the establishments forwards to your Excellency a dispatch of adjutant Don Manuel Milla, transmits the original diary of that officer, and recommends to your Excellency's consideration the singular merit that he deserves from his discharge of his important commission.

Your Excellency,—Under date, Yavisa, the 13th of the present month, the adjutant Don Manuel Milla writes me the following:

"Signor Don Francisco Fersen,—By the adjoined diary you will know all that has been done, as well as the motives of my taking this step,* since it would be very painful if, after having accomplished my purpose, some fatality should occur. I cannot explain myself more fully, lest I may detain Suspani and his Indians, but as soon as I arrive

* That is, returning to Carolina by way of Panama and Portobello, instead of by the Chuquanaqua.

at Puerto Principe, I shall write you a more detailed account, and beg to acquaint you that my return to my post (at Carolina) will be with all possible haste. God keep you many years.

MANUEL DE MILLA SANTA ELLA."

Yavisa, March 13, 1788.

The which I transmit to your Excellency with the original diary of the journey of that officer, whose singular merit and love of the service have been manifested, in so distinguished a manner, on this important occasion, that I doubt not that your Excellency, who knows so well how to appreciate merit, will consider him worthy of being introduced to the notice of the Sovereign, that he may receive from the royal bounty a reward corresponding to so distinguished a service, and I make the present known to your Excellency in fulfilment of my duty. God keep your Excellency many years.

FRANCISCO DE FERSEN.

Carolina, March 24th, 1788.

No. 3.

DIARY OF TRANSACTIONS AT THE FORT OF SAN
FERNANDO DE CAROLINA.

*To His Excellency Don Antonio Caballero y Gongora,
Santa Fé de Bogota.*

Most Excellent Sir,—By the adjoined diaries, No. 24, of the last sixteen days of the month of December last, and No. 1 of the first fifteen days of the present month, your excellency will be put in possession of the occurrences of the said period, and also of the state of the troops who garrison this establishment, of the promotions that have

taken place, and of the present strength of the force. God keep your excellency many years.

ANTONIO VELASQUEZ.

Carolina, 16th January, 1788.

Diary, No. 24.

Dec. 17th, 1787. Luis Sanchez, soldier of the stationary regiment of Carthagena, died in the hospital of the island.

21st. Anchored at daybreak, in this bay, the merchant schooner Nuestra Senora de la Candelaria, captain Don Domingo Garcia, with provisions for sale for the establishments of Darien and Porto Bello.

At 9 A.M. arrived captain Urruchurchu, *alias* Suspani, with his brother, son and daughter, and four of his comrades; they stopped all night at the establishment, which is the first time that such a thing has happened; he said that it was now time for the rivers to fall, and that when we wished to open the roads, the *Indians would all be willing to give their consent*; that he had not brought his wife because she was ill of fever, but would bring her next month, to be cured, and to live near the settlement.

At 7 P.M. sailed for Carthagena His Majesty's brigantine El Coro, with dispatches on the royal service.

23d. Captain Urruchurchu departed. Anchored the merchant sloop La Altisidora, captain Don Francisco Alonzo, with dispatches on the royal service, from Concepcion.

24th. The convict Antonio Ruiz died this day.

25th. Anchored the felucca Santa Ana, captain Don Juan de Acosta, from the Sinu, with provisions to sell at these establishments.

27th. Anchored the schooner Nuestra Señora de los Dolores (our Lady of Sorrows), Capt. Silvestre Niños, from Concepcion.

28th. Anchored His Majesty's brigantine Fachin, capt. Don Vicente Solièr, with the relief of the regiment of the Princess, 16 artillerymen, veterans and militiamen, a lieuten-

ant, 2 serjeants, and a militiaman of the companies of Choco, and 4 soldiers of all colours; she brings provisions for those establishments, and money for Concepcion and Mandinga.

29th. Sailed for Sapote * the schooner Nuestra Señora de los Dolores; and for Carthagena the schooner San Josef, *alias* El Atrevido (the Intrepid).

30th. Arrived capt. Hill, of Putrigandi, with his son, to receive payment for the palm leaves brought by the schooner, and which amounted to 20 dollars and 3 reals; having asked him if there was anything new, and if the Indians of Captain Hill, John's, and those of the Chuquanaqua were still rebellious, he replied that they were all willing to enter into the peace, and that there was nothing new amongst them; the same account was given me by Capt. Urruchurchu on the day that he visited the establishment.

31st. Sailed for Cayman the sloop Altisidora.

ANTONIO VELASQUEZ.

Carolina, 31st Dec. 1787.

[Then follows a list of the troops and inhabitants amounting in all to 650 individuals; to this list the following notes are appended:

NOTES.—The promotions which took place last month were in consequence of the detachment of artillery, and La Princesa not having been relieved.

Of the 650 individuals composing the whole population, 151 are colonists and others employed at this establishment, and forty-two sick; so that there only remain for service, 457 men.

Of the 457 remaining for service, there are employed daily, two officers, eight serjeants, one drummer, ten corporals, thirteen artillerymen, and ninety-eight soldiers, besides those employed in the works, and the company of

* In Cispata Bay, near the mouth of the Sinu.—E. C.

volunteers at work on the island; remaining off duty in this fort, 276 men.

JOSEPH DE GUERRA Y VAOS.

ANTONIO VELASQUEZ.

Carolina of Darien, 1st January, 1788.

Diary, No. 1,

Containing the transactions of the first 15 days of January, 1788.

2d.—Captain Hall went away with his son, his brother, and three Indians that he brought; he said, that when he sent for the Palm-leaves that he had cut, he would bring his wife, who wanted to see the Spaniards, and their settlements; and that the reason he had not brought her, was, that his canoes (piraguas) were small, and the Indian women were afraid to embark on them, as they did not know how to swim.

4th.—Sailed for Concepcion, Mandinga, and Portobello, the schooner, Nuestra Señora de la Candelaria, Captain Don Domingo Garcia.

9th.—Anchored at daybreak, His Majesty's Gun Sloop, La Melisendra, Captain Don Manuel de Echandià, from Carthagena and Zapote; she brings despatches on the royal service, and is to remain in command of the Bay, in place of the sloop Pentiquinestra, which is to preceed to Concepcion.

7th.—Anchored; Don Bartolome Camilo's sloop, with letters from him, communicating to me His Excellency's orders to him, to send the uprights, palm-leaves, beams, and other things necessary for the house and settlements that are to be built: he forwarded eighteen labourers, and advised me that in the boats which would bring the above materials, he would send the remainder of the labourers.

Also anchored, the sloop Doña Rodriguez from Concepcion and Mandinga, to which establishments she conveyed provisions on account of His Majesty.

Sailed, His Majesty's brigantine, San Joaquin, for Concepcion and Mandinga, with stores and provisions; and also Don Bartolome Camilo's sloop, for the mouths of the Atrato.

8th. Sailed for Cayman, Gandi, and the mouth of the Atrato, His Majesty's schooner Dulcinea; she convoys the Choco Indians, who go in five canoes to the mouth of the Atrato, and is to leave the lay-brother, Frai Pedro from Concepcion at Gandi, with an Indian of that town lately baptised, who has a commission from His Excellency the Viceroy; she proceeds to Cayman, for the purpose of seeking a Choco Indian who lives in that settlement.

Sailed for Concepcion and Mandinga, the sloops Virgin of Monserrate, Captain Don Joseph Doyle, and the sloop, Doña Rodriguez for Zapote, with letters on the royal service for Captain Don Bartolome Camilo, and for Don Diego Vellojon, who was commissioned to seek after the sloop Mariana, which left for cattle two months and eleven days ago, and has not appeared since.

Fernando Lecadio, captain and owner of the Doña Rodriguez, having informed me that he had learned from the Indian Pita that the Lele (Indian priest), of Carti, had told him that there was an English ship, with many people on board, and fourteen guns, on the coast, at the same place where last year and the year before there appeared another, which escaped our vessels, I immediately sent this information, through an officer, to Don Manuel de Echandia, the commandant of the bay, in order that he might, if he deemed it proper, set sail with his gun-sloop, the Milisendra, and the Pentiquinestra, Capt. Don Francisco Echeno, in search of the said ship, and that he might call upon me for every assistance that he required.

9th. The said Echandia replied, that he would sail at once with the two vessels, and that he required no assistance, since he would be able, with his vessels, to defeat the English ship; at two o'clock in the evening he sailed.

Commenced, to-day, to clear the ground for the house for the new settlers.

10th.—Anchored off the point of Golden Island His Majesty's brigantine, San Joaquin; she comes from above, with loss of her mainsail, which the Captain reported to me, with a request for assistance, which I immediately afforded.

Nine a.m. anchored the gunboat, Don Antonio, from Concepcion, with dispatches on the royal service.

The two gun-sloops which sailed yesterday were sighted to-day.

12th.—Anchored the sloop Altisidora, from Cayman; arrived from up the coast, the sloop Nuestra Señora de Monserrate.

13th.—Anchored at eight, a.m., his Majesty's brigantine, Don Belianis, from Zapote, with letters from Don Bartolome Camilo, a cargo of upright posts, laths, bushrope, beams, and yards, and thirteen labourers.

This day the banks of the river Aglaseniquia were examined, from its mouth to its head, in order to select the best place for the new settlements that are to be established according to superior orders.

The convict, Manuel Molina, died in the hospital of the Island.

14th.—The Don Belianis began to discharge cargo.

Francisco Gonzales, militiaman of the 2nd company of Nata, died suddenly.

At four p.m., arrived Captain Urruchurchu, his brother, and three comrades; he said, that when the road was to be opened, and the troops were to go to commence it, I should let him know, since the weather was now fine. I told him that I was waiting until his Excellency sent orders to commence opening the road. Having asked me when a boat should sail for Carthagena, because he wished to go there to see his Excellency, I replied that one would sail soon, and that I should notify to him the date of her departure.

ANTONIO VELASQUEZ.

Carolina, 15th January, 1788.

I certify that the above documents are faithful copies of the originals existing in these archives.

JOHN OSCAR LEVY.

Keeper of the Archives of the Government.

Bogota, June 3, 1852.

The signature of John Oscar Levy, appended to these documents is that of the Archivero.

P. WILSON.

Bogota, 4th June, 1852.



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